

AMERICAN GAS ASSOCIATION

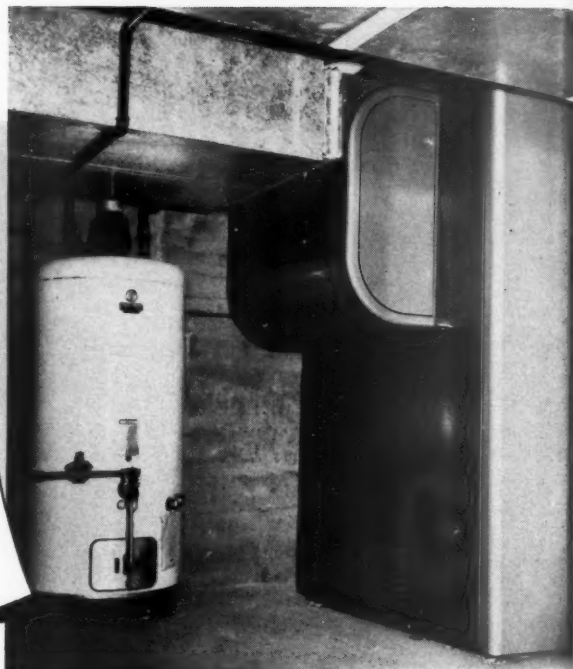
Monthly

FEBRUARY
1951

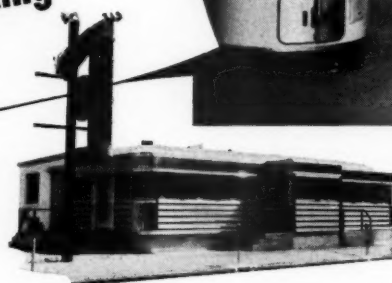




New Air-Conditioned Monarch Diner, Waltham, Mass.



Gas-fired Servel Air-Conditioning installation and Ruud Gas Water Heater at Monarch Diner.



COOKING FOR PROFIT. Proof that it's smart to use GAS when cooking for profit is this statement of John DeCola, President of Monarch Diner, Waltham, Massachusetts:

"Ten years spent in cooking for a profit has convinced us that Gas is the ideal fuel.

"When we built our new, larger diner, we investigated all types of equipment, but when it came to our final decision, we stood pat with the



Chef cooks on Gas range for 1500-1600 daily customers.

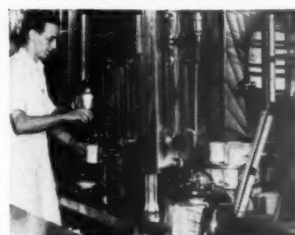
fuel which has given dependable, adaptable service . . . Gas.

"COOLING FOR PROFIT is important to us, too. So when it came to choosing air-conditioning, we again looked to Gas. The decision was made easy when we discovered that the all-year Gas air-conditioner worked with no moving parts to wear and give trouble. Long-life, continuous peak operating efficiency, low maintenance cost, certainly sold us again that with an all-year Gas air-conditioner we'd have no seasonal slumps when customers would stay away because our diner was too hot or too cold.

"Next to good food, plenty of hot water is a restaurant necessity—so we installed an automatic Gas water heater, and it gives us constant hot water with no let-downs—and all for less money!

"We certainly endorse GAS for dependable, low-cost operation of an eating place."

Open 7 days a week, day and night, Monarch Diner serves 1500-1600 patrons a day, depending on economical Gas to supply comfort, fine food, and clean conditions. Monarch Diner demonstrates the complete utility of Gas—so useful because Gas is also



Gas provides fresh, hot coffee for Monarch patrons.

economical, clean, and easily controlled for fast service.

Gas can keep your profits up, your overhead down, too. Your Gas Company Representative has the facts about modern Gas equipment for air-conditioning, cooking and instant water heating. Call him today.



AMERICAN GAS ASSOCIATION

420 LEXINGTON AVENUE, NEW YORK 17, N. Y.

• Current American Gas Association advertisement promoting three major types of gas utilization among operators in the restaurant field



This month's cover: Gas is helping America to rearm by heat treating component parts of weapons such as this 90 mm anti-aircraft gun. Photograph by Ewing Galloway

THE gas industry is alerted this month to a malady that sooner or later strikes every well-established field of endeavor. . . . We must avoid the habit of parroting that "gas is best," argues C. H. Horne, speaker at the Home Service Workshop. We must know why gas is best through actual comparison of both gas and competitive services. You cannot do anything about electric cookery unless you have cooked with electricity. Test both with an open mind. Learn where gas is best and where it is weak. Tell your boss. Only then can we begin to move against competition. . . . This advice to home service and sales departments applies equally to other branches of our industry. The parrot says "Accidents can never happen to me; never happen to me." But experience proves that accidents can happen to you; results show that accidents can be as costly as sabotage. In home service, sales, accident prevention and other fields, parroting leads to overconfidence, eventually sabotages initiative. Without initiative, without new sales approaches, energetic customer contacts and long-range research planning, no industry can remain at the top. This initiative must start with management and reach into every corner of our business. It must be backed by powerful weapons—personal experience and the will to serve.

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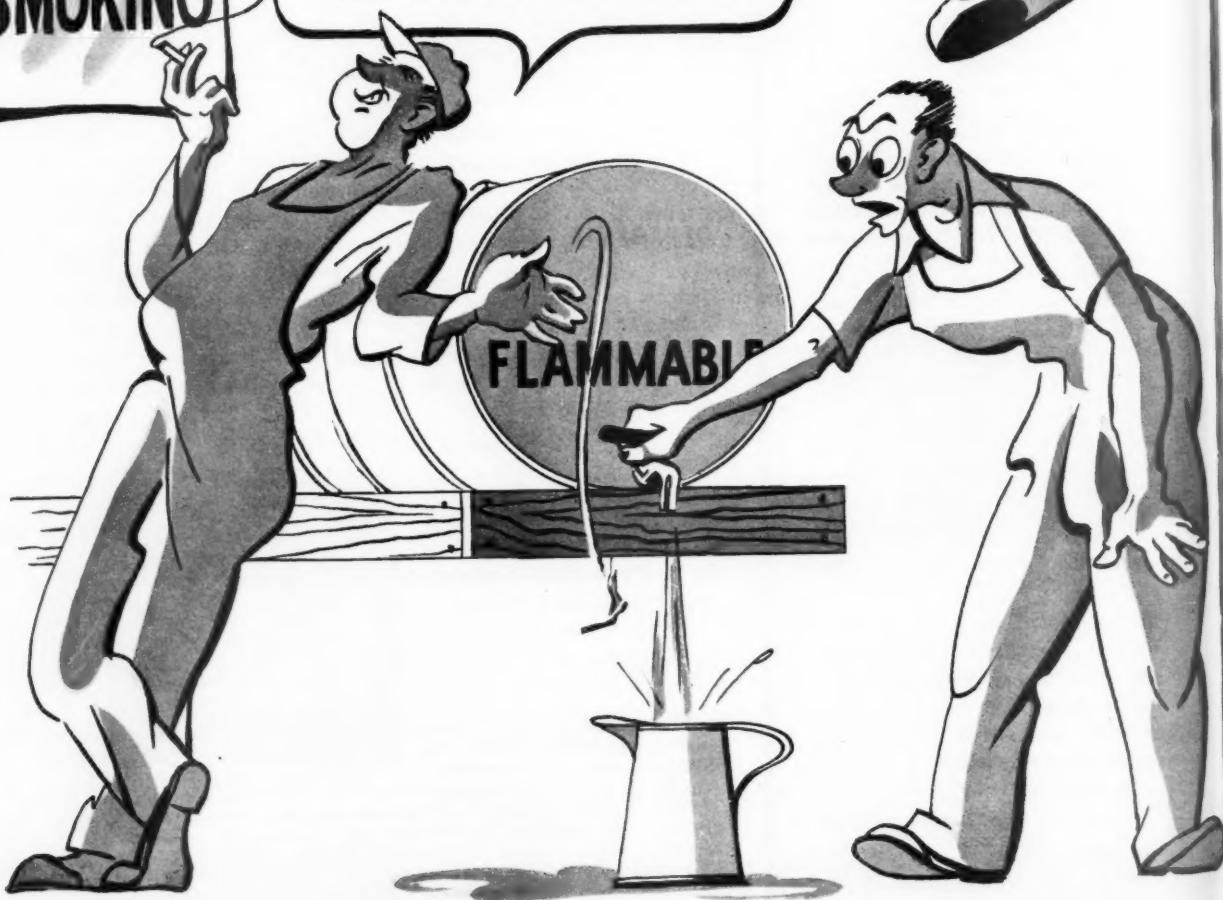
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*Gas industry study reveals vital
importance of a separate safety department*

Accidents carip



**THIS ATOMIC BOMB
SCARES ME ...
WE COULD GET
BLOWN UP, YA KNOW!**



cripple your manpower reserves



Accidents can be as costly as sabotage. They cripple workers, destroy morale, hurt production. They are an insidious drain

on the nation's manpower.

Today, gas industry leaders are aware of these facts as never before. They know that despite shining accomplishments in conservation of natural gas and prevention of fire, the industry lags behind in the accident prevention field. They know that many accidents can be avoided.

It has been done! In 1949, some 36 member gas companies cut their accident frequency and severity rates by 25 percent or more. At least 100 other companies made a 25 percent reduction in either severity or frequency rates. One large manufactured gas company reduced the frequency of accidents by 56.1 percent in 1949. This company lowered the number of disabling injuries from 6.22 per million man-hours to 2.73 per million manhours at a time when the average for the entire industry was 17.92.

The over-all picture is darker. According to National Safety Council, gas utilities in 1949 ranked thirty-fourth among all industries in the frequency of disabling injuries. In severity, gas utilities were twenty-second from the top, just slightly better than the average for all industries.

President Hulcy and the Association's Accident Prevention Committee have accepted this challenge. They have opened a concerted drive to plug the drain on manpower reserves. It will be a long-term job and a tough one—but it can be done.

One of the first steps in the new program was to provide for more publicity on accident prevention. The A. G. A. Accident Prevention Committee is greatly enlarging its services (see "Safety means survival," January 1951, A. G. A. MONTHLY). Another step is to establish closer teamwork with regional associations and other gas industry groups.

Probably the most important task of all is to obtain and

keep the wholehearted backing of top management. No safety director can do the job singlehanded. All too often, accident prevention directly affects company operations, requires top level decisions. The safety director may know that his truck drivers are using routes that endanger other employees. Or certain machinery may need replacing. But his hands may be tied unless he has the authority to act or is himself an operating executive.

On December 11, 1950, President Hulcy appealed to the heads of all member companies to spur the safety drive by improving their individual company records. He also asked for suggestions. The response was immediate.

One gas executive called for "a free exchange of ideas and suggestions on accident prevention between gas company utilities, to be collected and distributed by A. G. A.

"We believe," reported another executive, "that all safety ideas used by the gas industry should be gathered, edited, and made available to member companies."

Another gas man requested information on new processes and new problems as they arise. "It might be," he added, "that your committee could offer to give suggestions on setting up safety organizations for those that do not have them. It might be that your committee could act as clearing house for suggestions or problems that any member might be in need of solving."

Other replies to Mr. Hulcy's letter called for posters to keep employees safety-minded, and codes of safe work practices. Already, the Accident Prevention Committee is tackling both of these subjects. As a result, posters of National Safety Council are now being made available to the gas industry. Announcement of safe practice codes is expected.

Following is a resume of replies to Mr. Hulcy's letter. The MONTHLY believes that this information includes a variety of helpful ideas some of which may be usable in your own company.

Company A

We are an independent company only about two and a half years old. However, the construction and operating personnel have been on this same property for a number of years. We have not had a lost-time accident during the time we have been in business. The construction and operating

Cartoon at left redrawn from "The Safe Worker," copyright, National Safety Council.

● *Safety is a fulltime job—pictures tell a dramatic story of the*



KEEP THE EMPHASIS ON SAFETY: Changing traffic signals and flashing red lights on "safety record board" (left) keep employees up-to-date on company driver accidents at Consolidated Edison Co. of New York. (Below) Consolidated Edison demonstration launches street protection program for outside personnel



personnel had had only one lost-time accident during a period of 13 years prior to our acquisition. There is nothing we can do to improve a clean record. Our problem of course is to maintain the status quo as long as practical.

We continue having regularly scheduled safety meetings on company time each month and endeavor to stress safety to all employees at all times. In my opinion, every employee feels his responsibility and is giving his 100 percent cooperation.

The Accident Prevention Committee and Association can help by selling management on the many advantages of a good safety record. It would, of course, be management's job to sell the idea to every employee. The financial benefit to everyone, plus possibly a little competition among departments, should help sell the idea to all.

Company B

Our entire gas department, averaging 405 employees per month, has had 26 employees injured during 1950, four of these injuries resulting in lost time. Only 35 days were lost as a result.

I believe that the satisfactory experience of our gas department for this year and preceding years is due to the following reasons:

(1) Supervisory employees, including foremen, of the gas department, have realized the importance of accident

prevention and have done a good job in this work.

(2) A meeting of all gas department foremen is held each month with accident prevention one of the major topics.

(3) All accidents are investigated. In case of serious accidents, a meeting is held to discuss the trouble and means of preventing a recurrence.

(4) Bi-monthly inspections of department facilities are conducted by the safety committee. In most cases, the committee indicates unsafe practices or conditions and corrective measures taken.

(5) Training in safety and first aid given to employees at the welding and meterman schools has had a beneficial effect on the department's accident record.

Company C

Although the record of our company as a whole is not the best, it has shown considerable improvement since greater emphasis has been placed on the safety program. The gas department went through the entire year of 1950 without a lost-time accident.

We have concentrated on education of supervisory personnel. These men in turn carry the message to personnel under their supervision. Monthly safety meetings are held in all districts and a systematic educational program is put on at each meeting. The chairman of the meeting is elected

ry as that gas companies are taking to improve their safety records



SOLICIT EMPLOYEE SUGGESTIONS: Worker at New Orleans Public Service Inc. placing safety wrinkle in "progress meter" box. Best ideas bring cash awards

INVESTIGATE ACCIDENTS: Review committee at Milwaukee Gas Light Company using intersection diagram, model cars and trucks to determine whether company employee was at fault in a crash



REMEMBER FIRST AID: "Tailboard conference" at The Peoples Gas Light & Coke Company in Chicago shows foreman instructing three employees in artificial respiration

from the group for a period of usually six months. He is responsible for conducting the meeting, obtaining assistance in the form of material to be used from the safety department.

We have insisted that our safety rules be followed. In some cases, where there has been infraction of rules, disciplinary steps have been taken. Each supervisor is advised each month as to the type of accident, number of accidents and other statistical information.

We believe that the A. G. A. Accident Prevention Committee can be helpful to us by furnishing training material which can be used in group meetings.

Company D

It is a pleasure to report that our accident frequency through November 1950 is 7.32, substantially below both the gas industry and the all-industry averages. We believe this is due to an organized and well-rounded accident prevention program that includes:

- (1) Management interest, support and participation.
- (2) Full-time safety staff working closely with A. G. A. Accident Prevention Committee.
- (3) Regular departmental safety meetings with planned programs.
- (4) On-the-job sessions.
- (5) Varied forms of safety publicity.

- (6) Departmental safety contest.
- (7) Use of Accident Prevention Committee safety films, foreman's reminders and other material.
- (8) Usual routine of reports, inspections and investigations.

The human side of accident prevention and the cost of accident makes their elimination good business; an improved record will increase public esteem for the industry. These factors make the Association's program most worthy of effort and deserving of support and success.

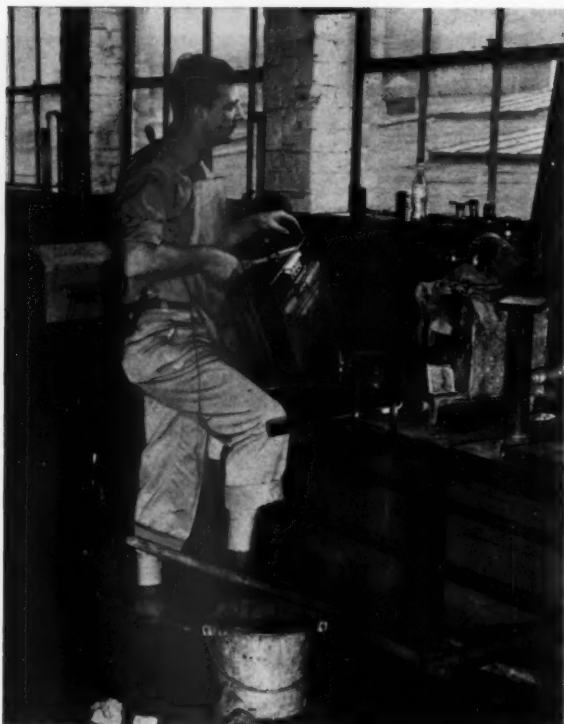
Company E

I agree that it is deplorable that the gas industry compares so unfavorably in safety matters with industry as a whole, especially when we compare so well otherwise.

We, in this company, are constantly striving to increase every employee's awareness of the fact that safety is a primary factor in the planning and execution of each job at hand. We feel that we have made some progress as we reduced the frequency of our disabling injuries ten percent in 1949 and expect an additional ten percent reduction this year. However, we are far from satisfied. Constant efforts will be made to improve our record.

I can only suggest that this matter of accident prevention be given a still more prominent place in the stated responsibilities of all sections of the Association. (See next page)

Find the unsafe practices



How many unsafe practices can you spot in the pictures above? Both photographs were posed by employees of New Orleans Public Service Inc. and used in recent safety contests. Members of the company's gas department recently established a new record, more than a year without a single lost-time injury

Company F

Some of the difficulty the gas industry is having in achieving a better showing safety-wise may stem from the fact that in many companies gas is a minor part of the business and gets a correspondingly minor share of attention. It seemed probable that in such a situation the problem might be complicated by poor plant design and antiquated equipment.

We are currently acting on this theory and are making every effort to avoid thinking of gas as a stepchild.

Company G

Unless we have unusually bad luck for the balance of the year we expect to have a frequency rate this year of about 13. This compares with a rate for 1947 of about 42. Likewise, our severity rate will be down approximately to .25, compared with 1.455 in 1947.

We have had an active safety program under way for about four years. Generally this is aimed at the foreman level, making each foreman responsible for his own crew. We have monthly safety meetings and in addition run first aid courses at about two-year intervals. We also have had a number of safety contests.

We encourage our top operating men always to attend. There are very few safety meetings which the superintendent of the company does not find time to attend. Likewise, the president attends a number of the meetings.

We operate a territory where there are many oil producing companies. Jointly with a group of them we have developed a small safety manual for employees based on problems in this region. We have also added in the copies for employees a few pages covering safe use of gas and precautions every consumer should take.

Company H

We employed a full-time safety supervisor three years ago and then set up a separate safety department. The work of the safety supervisor was so successful as to justify hiring an assistant to the department about six months ago. We are thoroughly convinced that a separate safety department justifies itself by the results we have obtained.

Company I

Before 1942 we had no clear-cut safety program. For 18 years previous to 1942, our frequency averaged well over 20. In 1942, we appointed a safety engineer. Since then, our frequency rate for the entire company (gas and water departments) has varied from a low of 7.10 to a high of 12.85. During this same period, the gas division alone has had frequency rates from 4.56 to 8.78. During this period, accident costs have been greatly reduced, although we have grown and had a construction program of considerable size.

Supreme authority is vested in the general manager. The safety engineer handles safety, hiring of male employees, all automotive claims and broken fire hydrant claims.

The safety board, a permanent committee, consists of supervisors just under top management rank, such as assistant gas engineer, personnel director, etc. The safety board has nine members, the safety engineer acting as chairman.

This board receives and reviews (Continued on page 38)

Check YOUR safety record!



**Manufactured
Gas Industry**

22.72

**Accidents
per million manhours
in 1949**

**YOUR
company's record
?**

**Accidents
per million manhours**

**Natural
Gas Industry**

15.52

**Accidents
per million manhours
in 1949**

Gas industry average—17.92 accidents per million manhours in 1949

What is your company doing about safety?

If the answer is "yes" to the following questions your company is well on the road to a sound safety program.

1. Does your company now have a fulltime safety director?
2. Has top management delegated authority to the safety director?
3. Does top management participate in safety meetings?
4. Is every accident thoroughly investigated and findings brought to attention of employees?
5. Is plant and equipment inspected regularly for safety hazards?
6. Are supervisory personnel held responsible for the safety of their workers?
7. Are safety meetings held each month?
8. Are supervisors trained to spot and report unsafe practices?
9. Are scientific hiring procedures used to obtain the best men for the right jobs?
10. Are employee suggestions actively solicited on safety matters?
11. Do all employees receive accident prevention and first aid training at regular intervals?

Yes No

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Keep this chart as a safety reminder

Check YOUR safety record!



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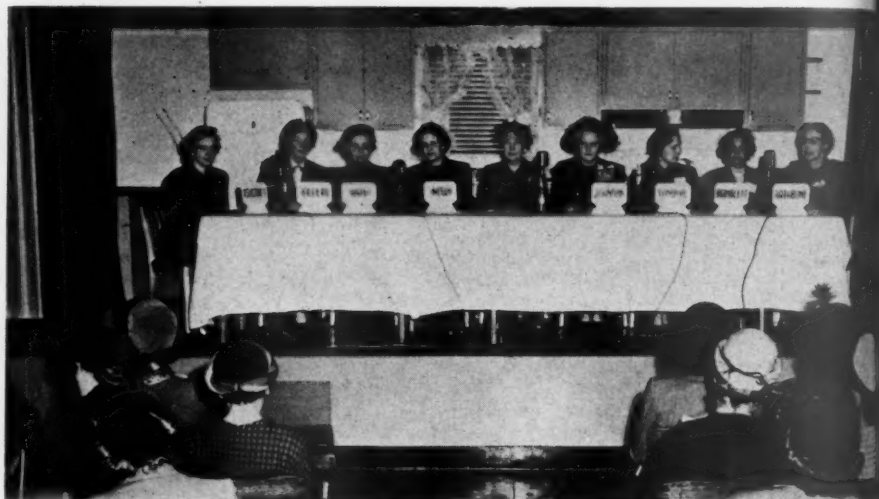
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Home Service speakers at the Workshop discussing the program: Irving K. Peck, vice-president, The Manufacturers Light & Heat Co. Thursday afternoon speaker: (Left to right) Mary Huck, Pat Hendon, Mrs. Arra Sutton Mixer, Kathryn Barnes, Mr. Peck, Mrs. Ellen Bridge



Workshop Panel discussion on the home call: (L. to r.) Mrs. Kathryn Ashcraft, Shirley Fegert, Mrs. Mary N. Hall, Mrs. Florence Neely, Eleanor Morrison, panel leader; Mrs. Kathryn O. Johnson, Mrs. Elyse Van Dyke, Mrs. Gladys Bramblett and Katherine Rathbone

Symposium speakers who discussed special home service programs at the Workshop: (Left to right) Mrs. Ruth Pocock, Beatrice Cole Wagner, Julia Hunter, Betty Jane Frahm, Sue Herndon, Dorothy Dean

Hospitality & Registration: (Top) Anne Sapensky (left), Fay Rudolph, Lucy Slagle, Margaret Matthews; (bottom) Mary H. Kathryn Heffernan, H. D. Keller, Alfreda Zukowski, Mrs. K. O. Johnson



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Speakers' table at Workshop luncheon: (Seated, l. to r.) Elizabeth Lynahan, Mrs. Ella McNaughton, Ruth Sheldon, Violet Faulkner, R. A. Gordon, Pauline Murrah, Eleanor Morrison, Dr. Hazel Stiebeling, Vivian L. Marshall, committee chairman; Jessie McQueen, D. A. Hulcy, president A. G. A.; Mary Rokahr, Mildred Clark, Clarice Gullickson, W. J. Schmidt; (standing) Ata Lee, Irene Muntz, Mrs. Lenore Sater Thye and Beatrice Cole Wagner

Home service meets the future

Home service made an excellent contribution to the gas industry in World War II. We looked to you then and we shall look to you again." This message by E. J. Boothby, president, Washington Gas Light Co., formed a theme for the Association's 1951 Home Service Workshop in Washington, D. C., January 3-5.

Designed as a training course for new members and a refresher course for more experienced personnel, the Workshop was attended by delegates from 34 states. Five representatives attended from Canada. Vivian Marshall, chairman, A. G. A. Home Service Committee, and home service director, New Orleans Public Service Inc., presided at the sessions.

Opening event of the Workshop was a symposium on special home service programs now successfully under way in seven utility companies. Helpful ideas for other companies to study were presented on "The Little Blue Flame"; "Teacher Dinners"; "Student Apprentices for District Work"; "Home Service in a Department Store Promotion"; "A Training Round Up"; "A Hat Show Demonstration"; and "Dealer Salesmen, Too." Details of each program were described by the following participants:

Julia Hunter, Lone Star Gas Co., Dallas, Texas; Mrs. Arra Sutton Mixter, The Hartford Gas Co., Hartford, Conn.; Sue Herndon, Arkansas-Louisiana Gas Co., Little Rock, Ark.; Beatrice Cole Wagner, The Philadelphia Gas Works Co., Philadelphia; Betty Jane Frahm, Montana-Dakota Utilities Co., Bismarck, N. D.; Mrs. Ruth Pocock, Michigan Consolidated Gas Co., Ann Arbor, Mich., and Dorothy Dean, The East Ohio Gas Co., Cleveland, Ohio.

E. J. Boothby, speaking at the opening luncheon, welcomed the delegates to Washington—"the nerve center of the political and economic situation."

He noted that "in 1951 both the utilities and individuals will find themselves facing new problems never before faced in this country. If we are to continue, we must guide ourselves to do the job we have to do as well as possible."

The industry's responsibilities were painted dramatically by D. A. Hulcy, president of A. G. A. Addressing a luncheon on the final day of the Workshop, Mr. Hulcy showed the seriousness of the challenge facing America today and the role that home service can play in meeting that challenge. His talk, "Living on

Front Street," showed how the gas industry has advanced from "over on the other side of the tracks" to one of the outstanding industries of America.

"We are touching the lives and rendering service to a big majority of the people of these United States. Before we know it," he said, "we will have an industry which, on an asset basis, will be well over ten billion dollars."

Another Workshop speaker, C. H. Horne, chairman, A. G. A. Residential Gas Section, analyzed the relationship of home service and sales departments. He advised home service personnel to "recognize your responsibilities in connection with sales. Stand on your own feet," he added, "and do not wait for your boss to plan every detail of your program. Don't be jealous of your prerogatives. Think of your work as a part of the company's program, not as an independent program. Be a good public relations ambassador for your company."

Mr. Horne made the following suggestions for gas company sales management: "Give home service a chance. Listen to the voice of home service when you make sales policies. Give home service an active part in your sales and pro-

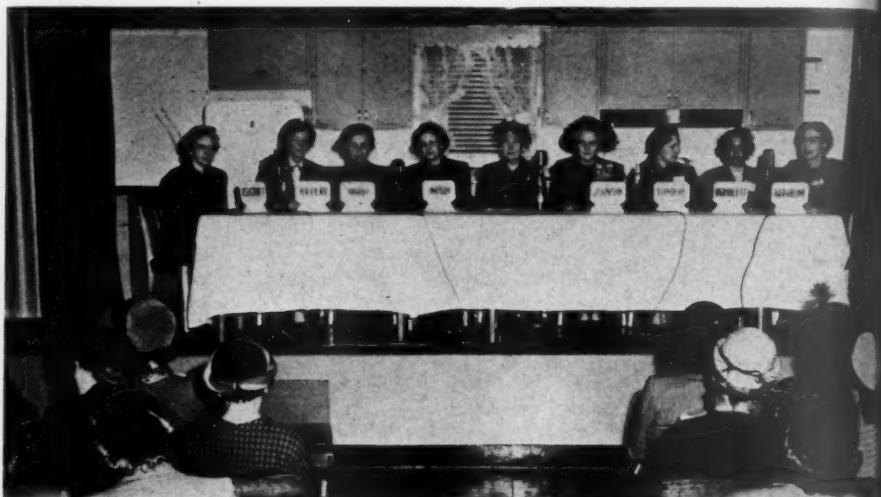


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Designed as a training course for new members and a refresher course for more experienced personnel, the Workshop was attended by delegates from 34 states. Five representatives attended from Canada. Vivian Marshall, chairman, A. G. A. Home Service Committee, and home service director, New Orleans Public Service Inc., presided at the sessions.

Opening event of the Workshop was a symposium on special home service programs now successfully under way in seven utility companies. Helpful ideas for other companies to study were presented on "The Little Blue Flame"; "Teacher Dinners;" "Student Apprentices for District Work;" "Home Service in a Department Store Promotion;" "A Training Round Up;" "A Hat Show Demonstration;" and "Dealer Salesmen, Too." Details of each program were described by the following participants:

Julia Hunter, Lone Star Gas Co., Dallas, Texas; Mrs. Arra Sutton Mixter, The Hartford Gas Co., Hartford, Conn.; Sue Herndon, Arkansas-Louisiana Gas Co., Little Rock, Ark.; Beatrice Cole Wagner, The Philadelphia Gas Works Co., Philadelphia; Betty Jane Frahm, Montana-Dakota Utilities Co., Bismarck, N. D.; Mrs. Ruth Pocock, Michigan Consolidated Gas Co., Ann Arbor, Mich., and Dorothy Dean, The East Ohio Gas Co., Cleveland, Ohio.

E. J. Boothby, speaking at the opening luncheon, welcomed the delegates to Washington—"the nerve center of the political and economic situation."

He noted that "in 1951 both the utilities and individuals will find themselves facing new problems never before faced in this country. If we are to continue, we must guide ourselves to do the job we have to do as well as possible."

The industry's responsibilities were painted dramatically by D. A. Hulcy, president of A. G. A. Addressing a luncheon on the final day of the Workshop, Mr. Hulcy showed the seriousness of the challenge facing America today and the role that home service can play in meeting that challenge. His talk, "Living on

Front Street," showed how the gas industry has advanced from "over on the other side of the tracks" to one of the outstanding industries of America.

"We are touching the lives and rendering service to a big majority of the people of these United States. Before we know it," he said, "we will have an industry which, on an asset basis, will be well over ten billion dollars."

Another Workshop speaker, C. H. Horne, chairman, A. G. A. Residential Gas Section, analyzed the relationship of home service and sales departments. He advised home service personnel to "recognize your responsibilities in connection with sales. Stand on your own feet," he added, "and do not wait for your boss to plan every detail of your program. Don't be jealous of your prerogatives. Think of your work as a part of the company's program, not as an independent program. Be a good public relations ambassador for your company."

Mr. Horne made the following suggestions for gas company sales management: "Give home service a chance. Listen to the voice of home service when you make sales policies. Give home service an active part in your sales and pro-



Luncheon principals at Workshop: (Left to right) Jessie McQueen, Howard Noyes, vice-president, Washington Gas Light Co.; Mrs. Eugenia Hatcher, General Foods Corp.; Eleanor Morrison, Mrs. Ida Jean Kain, King Features Syndicate; E. J. Boothby, president, Washington Gas Light Co.; Vivian L. Marshall, home service chairman; C. H. Horne, vice-president, Alabama Gas Corp.; Mrs. Helen Kendall, Good Housekeeping Institute; Irene L. Muntz, W. J. Schmidt, vice-president, Long Island Lighting Co., and Ruth Sheldon

motional programs."

His last pointer for sales managements was that "home service must have encouragement and incentive, elements which only management can provide." (*Mr. Horne's address is reprinted this month on page 11 of the MONTHLY.*)

"The Light Touch" was described at the Workshop by Mrs. Ida Jean Kain, special writer for King Features Syndicate, Washington, D. C. Writing a daily column which appears in 100 newspapers, Mrs. Kain advised her audience to "give your writing and speaking 'the light touch' but never touch up the facts." She described writing methods and noted that home service in its contacts with customers has the basis of valuable news information. This experience should be kept in mind in demonstration work and in reporting news events of the department to local newspaper editors.

"News in the Laundry" was the subject discussed by Mrs. Helen W. Kendall, equipment editor, Good Housekeeping Institute, New York. Mrs. Kendall described the results of a recent survey of laundering habits—the types and ages of equipment in use and the percentage of laundry owners who were following recommended practices. One of her observations was that the large increase in owners of automatic washers and dryers has stepped up the volume of automatic hot water in use.

The influence wielded by the consumer in determining quality of food products was explained by Mrs. Eugenia Hatcher, manager of the Homemaker Testing Service, General Foods Corp., Washington, D. C. Her title was "Getting the Consumer Angle." Mrs. Hatcher told how recipes that lack accurate or complete directions confuse homemakers.

She described techniques of the Homemaker Testing Service which General Foods Corporation is carrying on to improve its products. She also covered studies of trends toward better packaging and marketing.

Dr. Esther Phipard, food economist, Bureau of Human Nutrition and Home Economics in Washington, discussed "Nutrition Up To Date." She gave a progress report on nutrition research directed toward enlarging understanding of physiologic requirements for nutrients and how they function with use. She stated that studies show that the need for dietary improvement is widespread. However, there are many opportunities in contacts with the public to point up these needs for improvement and thus add effectively to nutrition education.

Demonstrations featured

Four demonstrations were an important part of the Workshop Program. In a training demonstration, "Platformalities," Mrs. Ellen Bridges, The Gas Service Co., Pittsburg, Kan., repeated a demonstration used by her company to train new personnel in the department. She indicated the reasons for selecting recipes that explain equipment features. In addition, the speaker emphasized the little things that please or displease women in an audience. She described the importance of a good display in closing the demonstration.

The school demonstration "Swing Your Partner" was presented by Pat Hendrick, Oklahoma Natural Gas Co., Muskogee, Oklahoma. This demonstration used the lightness and rhythm of the square dance in rhymes such as

"Swingin' on the corner—swingin' on the gate;

Swing this on the broiler pan when supper's runnin' late."

Or this rhyme:

"Honor your partner with a deep bow;
To keep a range clean, we'll show you how."

"The story of Frozen Foods" was presented by Irene Muntz, Rochester Gas & Electric Corp., Rochester, New York. Miss Muntz briefly discussed the techniques of preparing food for freezing and outlined some of the containers that have proved most successful. In particular, she recommended a food freezer for every department to make advance preparation possible and allow foods prepared for floor demonstrations to be frozen for future use. Miss Muntz then prepared a meal by cooking the frozen foods she had brought with her from her department's freezer in Rochester.

Another feature presentation, "Showmanship in a Cooking School," was a group of excerpts from the theater "Gasco Institutes" conducted by The Ohio Fuel Gas Company. Mary Huck, general home service director, presented the story of the schools. Two members of the Food Institute staff, Harriet Wolfe and Jack Fifer, presented six sketches: "The Blue Flame and Cinderella," "Cooking Carousel," "The Way to a Man's Heart," "Food Fashions in Review" and "Adventures in New Freedom Gas Cooking."

"Your Stake In Your Gas Company" was the subject used by Irving K. Peck, vice-president, The Manufacturers Light & Heat (*Continued on page 43*)

Home service and sales

By C. H. Horne*

Chairman

Residential Gas Section
American Gas Association

Have you ever been in a situation wherein someone asked in all seriousness if you really loved him? If so, you can appreciate the feeling I have about this subject. I wonder sometimes if home service and sales really are in love with each other. There seems to be every reason why they should be, yet there is always this question of what home service can do for sales. If they are not in love, I believe it is because there is a lack of mutual understanding.

Proper relationships between home service and sales management can be achieved only if both sides do their part. For those who are home service personnel, I would make the following suggestions:

- (1) Recognize your responsibilities in connection with sales.
- (2) Stand on your own feet and do not wait for your boss to plan every detail of your program. Make your own plans and then sell them to management with all your might.
- (3) Don't be jealous of your prerogatives.
- (4) Think of your work as a part of the company's program, not as an independent program.
- (5) Be a good public relations ambassador for your company. Be sure to participate in local civic activities.

So much for the part of home service personnel. Relations between sales management and home service are equally dependent on the attitude and actions of sales management. To them I suggest:

- (1) Give home service a chance. Be open-minded as to their value and to their program. Home service cannot succeed without qualified, well compensated, personnel. Don't expect miracles from unqualified employees.
- (2) Listen to the voice of home service when you make sales policies.
- (3) Give home service an active part in your sales and promotional programs.
- (4) Home service must have encouragement and incentive, elements which only management can provide.

I realize that these suggestions will not change any one. But I do believe that where you see a successful home service operation, you will find that the suggestions I have made have been taken into consideration.

I would like to cover briefly three ideas which I believe home service must take into consideration to do an effective job today in cooperating and assisting in making sales. (Continued on next page)

* Vice-President, Alabama Gas Corp., Birmingham, Alabama. Mr. Horne's remarks were presented at the 1951 A. G. A. Home Service Workshop in Washington, D. C., January 3-5.

Home service is in an ideal position to tell the performance story of gas. Picture above shows Rita Calhoun (center) Portland (Ore.) Gas & Coke Co., telling newspaper economist how complete oven dinner for five was cooked for two and a half cents



Our electric competitors are doing an excellent job of convincing some of our people who are potential customers, if not actual customers, that electricity affords the best method of cooking and is the most modern method of cooking. Sometimes I have gained the impression that they actually succeed in creating misgivings of gas as a cooking fuel in the minds of some of us gas people.

Naturally, when our competitors claim electricity is best and we claim that gas is best, there arise certain misgivings in the minds of the people concerning the product which they are using. The gas industry's problem is that of making the largest possible number of people believe its story. All of us know that the proof of the pudding is in the eating, and it is here that home service comes to the fore. You are the experts. You are the ones that manipulate gas ranges to do a cooking job. You are the ones who can compare and best evaluate the performance of gas vs electricity. The gas story must be backed by facts and performance if it is to do a better job than its competition. Home service can and should bring out the true advantages of gas vs electricity.

On the shoulders of home service personnel rests the obligation to tell us men which strong points of gas should be emphasized and sold over and over in our merchandising programs. Home service can point out the defects of our competitors' story so that our sales efforts can break through. You are the ones that can point out our own weaknesses in order that we may best protect ourselves in our sales efforts and in order that our research men and manufacturers can make a better range that will eliminate them.

Above all else, I urge every Home Service person not to kid herself, not to get into the habit of parroting "gas is best," but to know why gas is best by actual comparison through unbiased test of both gas and electric ranges. You can not do anything about electric cookery unless you cook with electricity. Test both with an open mind. Tell the boss wherein gas is best and wherein it is weak. Then our industry can begin to move against competition.

My pet project as chairman of the A. G. A. Residential Gas Section is to speed up the industry's program for improving the performance of gas ranges. This includes not only ignition, which was so ably handled by A. G. A.'s past president, Hugh Cuthrell, but also recommendations which have been made by the Committee for Improving Domestic

Gas Appliances. This list of recommendations was long. That in itself proves how far behind we are. This committee has worked hard and long to develop a list of recommendations that are realistic and within reach of accomplishment. The problem now is to have action taken on these recommendations by the Range Division of Gas Appliance Manufacturers Association. You can help by stressing the importance of these to your boss.

There is still another function home service can perform that will help sales. It is a function that no one else can fulfill so well. Evaluate your contacts with the homemakers so that management will have the best possible picture of what the modern housewife wants and what she is thinking.

Our range manufacturers can supply the type of range wanted by the public only if they know what it is. Your home service people are in the best position to know what is wanted by our homemakers.

In my opinion, the lack of knowledge by managements of the gas industry and gas appliance manufacturers industry is one of our fundamental weaknesses. We are too prone to make a range and then create the desire because we think it is a good product, rather than find out what the housewife wants and build it for her. To me, it is good merchandising to supply what people want rather than create a sales problem of trying to sell something that is not wanted. We can make the job a lot easier for ourselves if home service will conscientiously try to tell us what is needed in a gas range as a result of your use of the ranges and your contacts with the customers that use them.

Actually, the solution to the electric cookery bug-a-boo is that we need a better range and more people selling that range.

Home service help in developing a better range. Now let's discuss how to help get more people to sell that range.

When Senator Taft set about the task of being re-elected senator from Ohio, he was fundamentally faced with the problem of selling a lot of people and in that respect his problem is comparable to ours. Senator Taft was highly successful against great obstacles. Perhaps we can take a leaf from his notebook on salesmanship.

First, Senator Taft developed his sales talk. He organized the advantages he had to offer his constituents. He developed a plan for presenting these selling points to the people. (Continued on page 44)

Gas utility financing sets record

Rise in security issues accompanied by improvement in gas industry equity position

Total Gas Utility Operating and Holding Companies	120
Holding Companies	33
Straight Gas Operating Utilities	77
Combination Gas & Electric Operating Utilities	10
All Natural Gas Operating Companies	23
Straight Natural Gas Operating Companies	43
Combination Natural Gas & Electric Operating Companies	80
All Manufactured Gas Operating Companies	32
Straight Gas Operating Companies—Manufactured	21
Combination Gas & Electric Operating Companies—Manufactured Gas	11

a. Less than \$500,000.

Gas utility financing reached a new all-time peak last year and is expected to continue at a high level during 1951. In addition, the gas industry improved its equity position in 1950.

The increase in security issues is reported in a special survey conducted by the Association's Bureau of Statistics. It is further evidence of the spectacular growth of gas distribution and pipeline companies.

Reports from the survey show that in 1950 gas utility operating and holding companies issued an aggregate of \$1,720 million in common and preferred stocks, bonds, debentures, and long-term notes for new construction and refunding purposes. This is an increase of 16.8 percent over the previous peak in 1949 when operating and holding company issues reached \$1,472 million.

In addition to the record volume for the gas industry as a whole, significant changes occurred in the several types of issues. For the first time since data became available, the dollar value of security issues by straight gas operating companies exceeded that by combination gas and electric companies. (Combination companies are defined as those deriving between five and 95 percent of their total operating revenues from gas operations.)

Issues of the straight gas companies rose 57.9 percent to a total volume of \$777 million. On the other hand, combination company issues actually declined

\$215 million from the 1949 peak of \$710 million. (These record figures relate only to issues by operating companies sold in the financial markets and exclude holding company issues and sales by subsidiaries to their parent companies.) Thus straight gas operating companies accounted for 52.3 percent of all issues by operating gas companies in 1950, compared with 34.7 percent in 1949.

As might be expected from the industry's expansion trends, straight natural gas companies accounted for the principal increases in financing. Undoubtedly, the numerous large issues by pipeline companies were a major factor within this group.

Natural gas increases

Increases by these straight natural gas companies more than compensated for the decreases reported by combination gas and electric companies. Straight natural gas operating companies with security issues of \$743 million accounted for 43.2 percent of total financing by the gas utility industry (distribution and transmission, straight and combination, operating and holding companies).

Another indication of the relative importance of financing by straight natural gas companies is the fact that they accounted for 95.6 percent of all placements by straight gas operating companies. In addition, combination natural gas and electric operating companies is-

sued \$380 million of securities. Thus the entire natural gas branch of the industry, exclusive of holding companies, accounted for security issues of \$1,123 million in 1950.

Manufactured gas companies, on the other hand, reported a drop in the absolute and relative magnitude of their financing from \$379 million in 1949 to \$132 million in 1950. Actually, straight manufactured gas operating companies reported an increase from \$15 million to \$21 million, but this represented only 1.2 percent of total gas industry placements. These decreases within the manufactured gas industry reflect primarily the declining number of companies in this category as the process of converting to mixed or natural gas continues. Issues by mixed gas or liquefied petroleum gas utilities, or by utilities distributing more than one type of gas, and by gas holding companies, are included in the over-all totals but are not shown separately.

Improvement in the industry's equity position during 1950 is revealed by the increasing proportion of common and preferred stock issues as compared with the previous year. Thus the \$509 million of such stock issues represented 29.6 percent of all issues by the gas industry during the year. In 1949 the \$401 million issues accounted for 27.2 percent of all gas industry financing. For the period 1945-1949, such equity issues constituted only 17.8 per- (Continued on page 44)

Security issues by gas utility industry, 1949-1950

(Millions of Dollars)

Total Security Issues 1949	Common Stock		Preferred Stock		Bonds		Debentures		Notes		Total Debt Issues	
	1950	1949	1950	1949	1950	1949	1950	1949	1950	1949	1950	1949
Operating Companies	20	1,472	261	200	248	201	777	896	317	137	1,211	1,071
Operating Utilities	33	55	23	10	10	0	0	0	200	33	200	45
& Electric Companies	77	492	100	53	65	23	406	350	100	42	612	416
Operating	10	925	138	137	173	178	371	546	17	62	399	610
Gas Companies	23	883	196	107	170	128	541	551	109	75	757	648
Natural Gas & Manufacturing Companies	43	468	88	52	58	22	398	330	95	42	597	394
Gas Companies	80	415	108	55	112	106	143	221	14	33	160	254
Operating Manufacturing & Electric Companies— Gas	32	379	11	49	20	60	87	239	6	28	101	270
	21	15	0	1	7	1	8	12	6	0	14	13
	11	364	11	48	13	59	79	227	0	28	87	257

APPENDIX

SOURCE: 1950 data compiled from such public sources as: Moody's Public Utilities, Utility Spotlight, Federal Power Commission, Chase National Bank, Public Utilities Department, Financial & Commercial Chronicle and are assumed to be reliable and to represent a reasonably complete summary of all financing by gas companies. 1949 data in addition based on individual company reports to A. G. A.

DEFINITIONS: Straight gas utilities are utilities deriving at least 95 per cent of their total operating revenues from gas operations.

Combination gas and electric utilities are utilities deriving at least 5 per cent but less than 95 per cent of their total operating revenues from gas operations.

Gas Operating Companies according to type of gas, are companies deriving at least 95 per cent of their gas operating revenues from the sale of one type of gas.

NOTE: Data contain all marketed securities including sales of securities through exercise of rights, "refunding" issues and notes with maturity of at least two years. Data exclude sales of securities by operating subsidiaries to parent holding companies, secondary offerings and direct exchanges of securities.

Research in the news

Pilot burner injection and flame stability analyzed

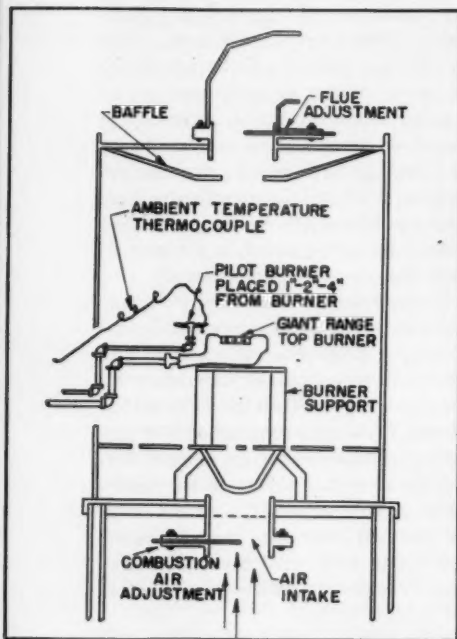
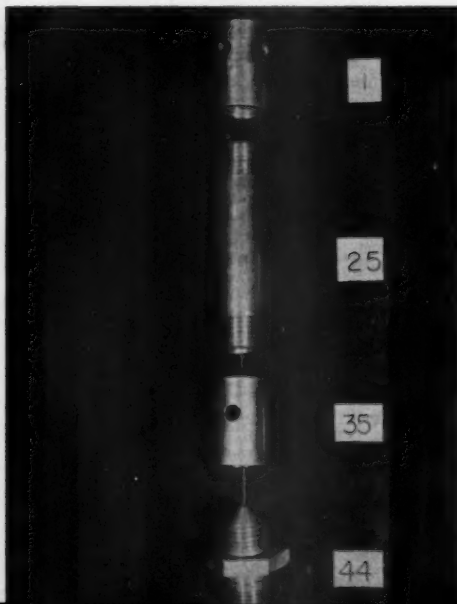


Figure 1. Chamber employed for A.G.A. primary air injection studies at high temperatures

Figure 2. Close-up showing method of assembling and identifying special pilot burners



a PAR activity

Repeated automatic ignition of main burners of modern automatically controlled gas appliances from a small pilot flame calls for ignition devices that are as dependable and trouble-free as possible. Automatic pilots have become as essential to the operation of most modern gas appliances as the self-starter is to the automobile.

Consequently, in recent years, one of the principal aims of American Gas Association utilization research has been to seek ways and means of improving pilots. Gradually a solid body of technical information concerning them is being developed.

Latest addition to this basic information is presented in Research Bulletin 57, "Research in Pilot Burner Design, Construction and Performance," published by the A. G. A. Laboratories. The bulletin explores those design factors affecting primary air injection and flame characteristics such as lifting, yellow tips and flash back. Both aerated and non-aerated type pilots are covered including designs of an experimental nature.

Previous investigations on gas pilots resulted in publication of Research Bulletin 42, "A Study of Bimetallic Thermal Elements"; Research Bulletin 46, "Research in Design Methods of Preventing Closure of Gas Pilot Burner Primary Air Openings by Dust and Lint"; and Research Report 1123-A, "Research in Pilot Design, Construction and Performance." Report 1123-A concerns design problems

associated with extreme operating conditions producing outages.

It had never been demonstrated clearly whether or not the design of gas pilots is in accord with the same fundamentals applying to larger types of atmospheric burners. Therefore, this phase of pilot design was included in the present work. Variations in ports, mixer tubes, air openings and orifices were investigated at pilot burner head metal temperatures of 250° F, 350° F, and 650° F, operating temperature having been found to be a critical factor. Direction of gas flow in respect to ports and positioning of the burner were also studied. Data are presented on 55 special pilot burner parts assembled to form pilot burners simulating contemporary designs and variations in component parts. The magnitude of primary air injection for both natural and manufactured gases is charted.

Figure 1 shows the chamber employed for primary air injection studies at high temperatures. Figure 2 illustrates the method of assembling and identifying the component parts of burners.

With the publication of Bulletin 57, further investigational work on pilot design, construction and performance has been authorized by the Committee on Domestic Gas Research as a PAR Plan activity. The effects of various materials used to construct pilots and the tubing connected to them will be studied intensively. Since operating temperature plays such an important part in their performance, means of conducting heat away from pilots so that the operating temperatures would be well below the cracking temperature of the gas will be explored. Consideration will also be given to cooling by use of secondary air and by shielding.

Another phase to be investigated will be the study of pilots in conjunction with automatic control mechanisms. In-

formation will be sought which will make it possible to adapt both non-primary aerated and single port pilot burners to contemporary and future gas-fired equipment. Carry-over ports and slots affecting burner operation likewise will be investigated as well as the effect of fuel gases both with and without oxygen and relatively high in sulfur content.

L. J. Kane and R. R. Rausch of the A. G. A. Laboratories conducted the experimental work for Bulletin 57. Mr. Kane was author of the bulletin. It is available from the A. G. A. Laboratories and is priced at one dollar.

Gas glow tubes for high temperature industrial furnaces

a PAR activity

Now available is an important new approach to the design of indirect heated, gas-fired industrial furnaces for processes such as high temperature heat treating, annealing, smelting and other industrial purposes. Details are presented in a recently completed research study sponsored by American Gas Association's Committee on Industrial and Commercial Gas Research. The work is particularly pertinent to applications where a combination of high temperatures plus controlled or special atmospheres surrounding the object to be heated are required.

Two distinct contributions resulted from the research. The major objective, exploring the technical potentialities of gas-fired silicon carbide glow tubes smaller than those commonly used for the radiant heating element, was achieved. In addition, a basic method of analyzing the heat transfer process within a glow tube furnace was developed for the first time. This method is applicable not only to small diameter tubes, a recent development, but to the whole field of high temperature glow tube heating. With corrections for the effect of roughness of tube walls on heat flow in the design equations formulated, the work likewise may prove to have a valuable bearing on analysis and design of radiant heating furnaces of all types. This is true whether tubes of sili-

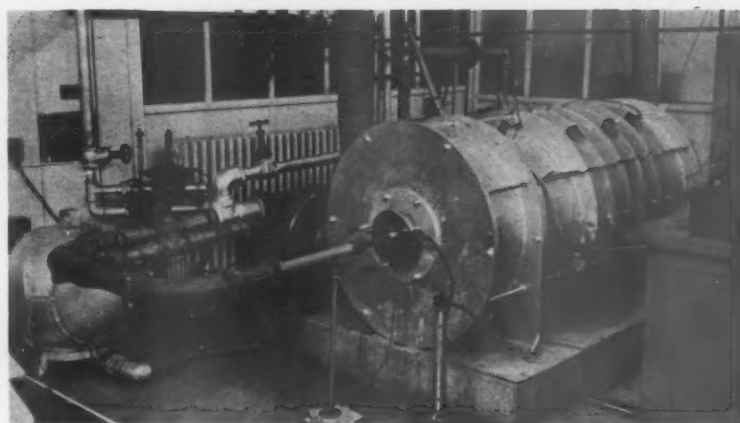


Figure 1. Experimental furnace with combustion equipment and controls employed at American Gas Association Laboratories in study of small diameter gas glow tubes

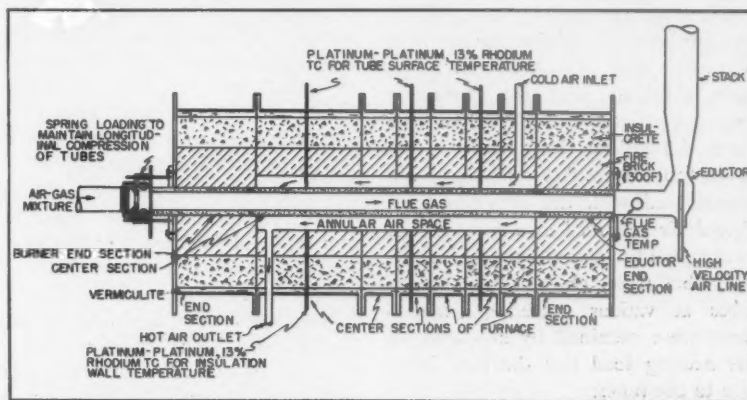


Figure 2. Cross section of glow tube furnace. Tests indicated small size tubes can be used effectively as radiant heating elements at temperatures above 2,000° F

con carbide, alloy steel, mild steel or various refractory materials are used. In other words, the data fill a need for general technological information on industrial tube furnace design. This information may prove highly advantageous to the industry in meeting the competition of other fuels.

The project was conducted at the A. G. A. Laboratories as a PAR Activity. Results are presented in Research Bulletin 56, "A Study of Small Diameter Gas Glow Tubes." Full advantage was taken of past research and related current studies by assigning to the project a staff member who had engaged in studying heat transfer in central heating domestic furnaces. Experimental work was performed by Richard L. Stone and Karl L. Badger of the A. G. A. Laboratories research staff.

Figure 1 shows the experimental furnace constructed and employed in the investigation. Figure 2 shows a cross section of the furnace. Figure 3 shows the small diameter glow tubes used as heating elements. Tubes of one-inch and three-inch inside diameter were used, whereas glow tubes four inches and more in size are more commonly in use at the present time. Blowers were used to supply air for premixing with gas for combustion, to operate the eductor for aspirating flue gases, and to provide air for heat load in the furnace chamber.

The tests indicated that small size tubes can be employed effectively as radiant heating elements with satisfactory performance at temperatures above 2,000° F. Essentially no contamination of furnace atmospheres by combustion products took place when static pressures within the ceramic tubes were

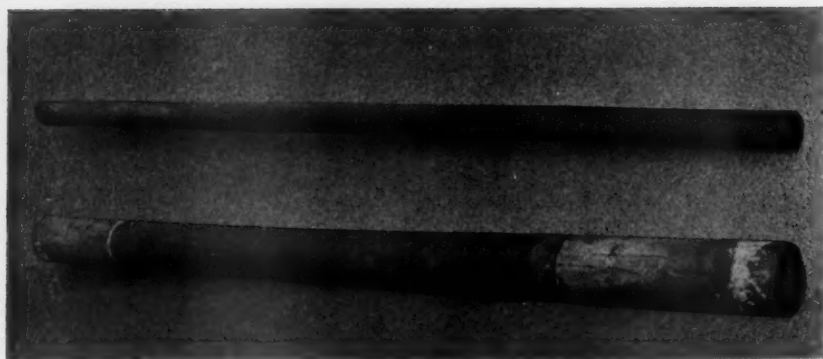


Figure 3. Small diameter gas glow tubes—one-inch and three-inch inside diameter—which were employed as heating elements in the experimental furnace during the PAR Plan project

maintained at or below internal furnace pressure.

Gas input rates as high as 1,260,000 Btu per hour, 3.9 million Btu per hour per cubic foot of combustion space, were obtained with the three-inch tubes. A capacity of 157,000 Btu per hour, 4.3 million Btu per hour per cubic foot of combustion space, was experienced with the one-inch tube. Forced air was used as a furnace load to establish the magnitude of heat outputs obtainable. Data concerning the tubes at various operating temperatures were obtained by adjusting of the heating load and the heat input rate to the tubes.

No apparent scale formation or other indications of glow tube deterioration were found after extensive periods of operation. Small ceramic tubes should provide long service provided that temperatures not in excess of

2,600° F are employed. Limitations in furnace capacity would be determined largely by economical supply of high pressure air and gas to produce input mixtures at burner pressures necessary to obtain the temperatures desired. Water cooling of metal burner tips was found desirable to insure reasonable burner life and durability.

Design equations for mathematically predicting the combined convection and radiation heat transfer coefficients for the tubes were worked out and are presented in the bulletin. Previous investigators have explored at some length the coefficients involved in transferring heat from fluids to smooth surfaces at relatively low temperatures. One of the principal objectives of the research, therefore, was the extension of this work to the highest temperatures involved in glow tube furnaces and the experimental evaluation of appropriate heat transfer coefficients for flow of gases through silicon carbide tubes having considerably rougher surfaces than metal tubes.

Thus, the basic heat transfer analysis presented, along with the test data and design equations developed, widens the general field of knowledge concerning such furnaces and consequently the technical approach to their design. To illustrate the use of the equations, a simplified design problem is worked out for a specific heating need. Methods are shown for calculating heat load, external tube area required, flue gas-to-tube heat transfer coefficients, and heat input necessary.

Research Bulletin 56 is available from the A. G. A. Laboratories, 1032 East 62 St., Cleveland, Ohio. The price is \$1.25 a copy.

Interchangeability limits charted for various gases

a PAR activity

Blending of fuel gases to meet increasing demands of modern gas service, particularly winter peak loads, calls for a high order of technical information on the interchangeability of various available fuels. Since World War II expanding house heating and industrial markets have intensified this need. Supplementing base load gases with others requires mixtures that will be compatible with the system and with the many types and kinds of appliances connected to its lines. Such mixtures are not easily determined.

Recognizing the need for authoritative information on this subject, American Gas Association has for several years sponsored various research studies with the aim of simplifying the problem. Ways and means have been found for eliminating much of the costly and extensive experimentation otherwise necessary. Adding greatly to the knowledge already on hand is a new research bulletin, sponsored by the Gas Production Research Committee under the PAR Plan and published by the A. G. A. Laboratories.

This bulletin summarizes the findings presented in four individual reports, published during the course of the investigation which was started in 1946. It is titled, Research Bulletin 60, "Summary Bulletin, Interchangeability of Various Fuel Gases with Manufactured Gases." It conveniently presents in handbook form data on the composition and performance of gas mixtures interchangeable with the following gases:

- 535 Btu, 0.41 sp gr Coke Oven Gas
- 535 Btu, 0.55 sp gr Mixed Coke Oven-Carburetted Water Gas
- 535 Btu, 0.63 sp gr Carburetted Water Gas
- 535 Btu, 0.68 sp gr Carburetted Water Gas
- 535 Btu, 0.73 sp gr Carburetted Water Gas
- Carburetted Water Gas Mixtures Interchangeable with 535 Btu, 0.62 sp gr Mixed Natural Gas-Blue Gas-Cracked Natural Gas-Producer Gas.

What's cooking?

● Last summer one of our very good customers who had had a stove for nearly a year called us one day with a complaint.

Nearly every time she baked in the oven, it smoked; and she couldn't understand it. We sent one of our men out to investigate and found that the dear lady had never used her broiler, even though she had had the stove nearly a year, and that a cookbook that we put in the broiler when we installed the stove had been smouldering away every time she lighted the oven. Her face was slightly red, but ours was more so for not having told her how helpful she would find the broiler in preparing different kinds of food.—*Gas House Gossip*

From reference data on some 400 gases published in Reports 1106A, 1106B, 1106C, and 1106D, the Supervising Committee and the Laboratories staff selected some 30 supplemental gases. Practical limits of interchangeability for these gases with the six base gases noted above are charted in the summary bulletin. Safe maximum additions of supplemental gases which would not cause appliance performance difficulties in the majority of utility systems are indicated. It was believed that if appliance conditions including burner adjustments, pressures, etc. in a system are similar to those existing in the laboratory test work, then the limits of addition of supplemental gas indicated in the tables are those which can be used in the district. On the other hand, if appliance conditions differ, decision as to permissible mixing limits can be reached by making tests on representative appliance burners using the information in the Mixed Gas Research Reports as a guide.

The data and information presented are designed to be helpful in a number of ways. They may be used: (1) to aid in selecting the gas to be used for peak loads or for an appliance changeover; (2) to predict the type of unsatisfactory appliance performance likely to occur if indicated limits are exceeded; (3) to determine the approximate limit of addition of a selected supplemental gas to a given adjustment gas; (4) to determine the most advantageous heating value of the supplemental gas; (5) to compare and explain difference in inter-

changeability reported for a given supplemental gas with different adjustment gases, or (6) to suggest modifications of gas composition which had not been considered before, giving a wider choice of alternatives.

In the case of the last of the six base gases listed, a somewhat different treatment is given than for the others. Instead of indicating limits of addition of various supplemental gases of fixed composition to the adjustment gas, the limits of composition of gas mixtures which may be used to replace the adjustment gas are shown.

Early research on mixing of gases attempted to develop mathematical equations which would indicate the interchangeability of gases. A "C" factor was derived, based largely on the ignition velocity of the gases. This is covered in Laboratory Report 689. Prior to the present study, Bulletin 36, "Interchangeability of Other Fuel Gases with Natural Gases," derived three indices to determine the interchangeability of supplemental gases with natural gases. These indicated the possibilities of lifting flames, yellow flames and flash-back, attacking the problem from a different viewpoint by breaking it down into these three components.

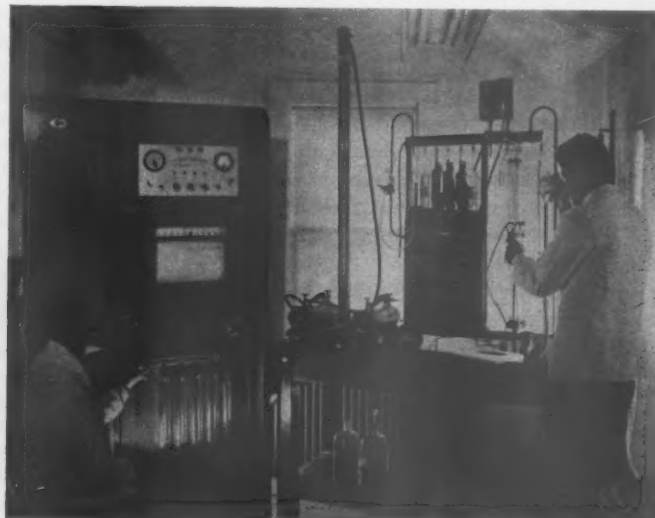
The present study indicates that none of the mathematical expressions investigated will predict with 100 percent accuracy the performance of supplemental gases on all appliance burners in a manufactured gas distribution system. The equations for lifting and yellow tipping

were found to be theoretically sound and accurate in about 85-90 percent of the cases. The flash-back equation, however, was not satisfactory for the manufactured gases studied.

Further experimentation with various test burners indicated that no single test burner index reading could be used to predict whether a supplemental gas would give completely satisfactory service on all appliances when interchanged with a known base load gas. On the other hand, index readings on certain test burners, such as the Rochester Test Burner, modified Flamdicator or Calor-optic, or on a thermal conductivity gas analyzer, could be correlated with the occurrence of a particular type of unsatisfactory appliance burner performance. Such factors as lifting, flash-back or yellow tips, could be correlated in about 80-95 percent of the cases once an average limiting index value was established. No satisfactory indication of incomplete combustion on appliances was obtained with any of the test burners.

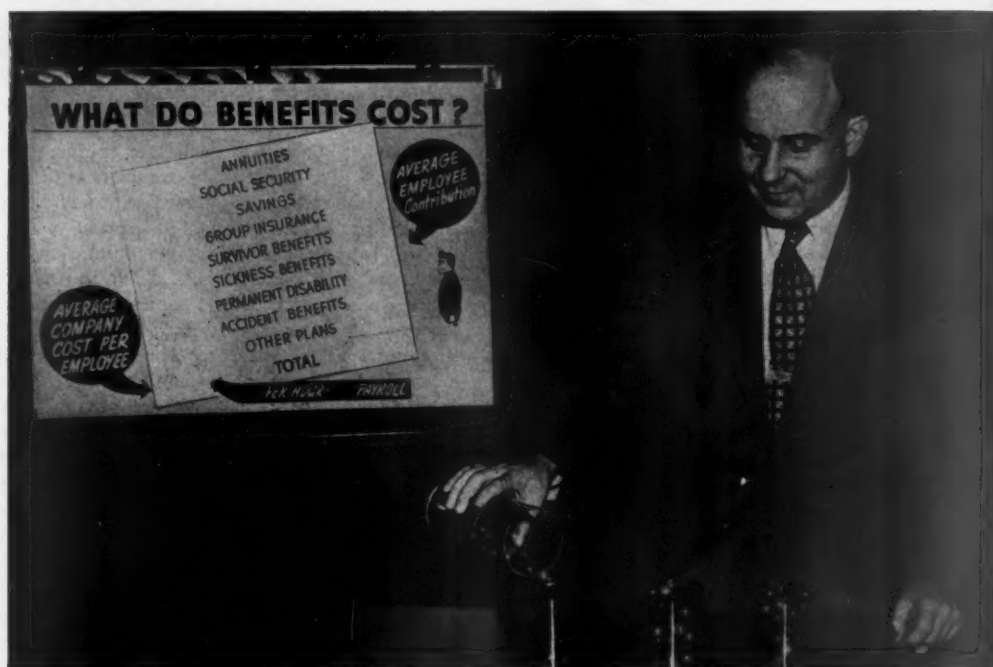
The study was conducted by A. M. Cunningham, A. W. Krause and M. F. Wilson of the A. G. A. Laboratories staff under the immediate supervision of Joan H. Hodgdon. Members of the Supervising Committee of the Gas Production Research Committee were J. F. Anthes, chairman; W. E. Churchill, W. R. Fraser, S. S. Tomkins, F. E. Vandaveer, C. C. Winterstein and Edwin L. Hall.

Bulletin 60 may be obtained from the A. G. A. Laboratories in Cleveland, Ohio. The price is four dollars a copy.



Joan Hodgdon (left), project supervisor, analyzing data during study at A. G. A. Laboratories of practical interchangeability limits of various fuel gases with manufactured gases. Photograph at right shows gas analysis equipment employed in mixed gas study

How to improve employee economic understanding



Keep employees informed by explaining those things in which they are most interested. Basic themes such as the value of the company's benefit programs can be used at employee forums to develop, fortify or confirm understanding of the firm's economics

● Should business concerns teach economics to their employees? If so, what methods should they use and how far should they go? Few subjects are more controversial than this one. Here, for the readers' study and comment, is a startlingly "low pressure" approach to economic understanding adopted by Esso Standard Oil Company.

The past several years have brought a new and active development in industry. A widespread effort has sprung up to educate employees in the field of economics. By diverse, but strenuous means, many companies are trying to develop new champions for the Free Enterprise

system. Spokesmen are stressing the urgency of economic education activities by business to aid in preservation of the American way of life.

Developments in industry had reached the point by the start of 1950 that management requested a special study as to how we in Esso should be handling economic education. A two-month research study was undertaken, which included a careful check on available literature and involved analyzing what some 57 companies were doing. Opinions were also secured from a half dozen consultants and a number of Eastern universities. As a result of this research a detailed report, entitled "What Should Esso Be Doing in the Field of Economic Education for Employees," has been prepared. Highlights

from that report are presented in this discussion.

The subject of economic education helps focus attention on our whole internal communication problem. We have already developed quite a few techniques in the field of communications. In Esso Standard we have four principal house organs, plus a number of local ones in the sales divisions. We have made some progress in the field of literature for various types of employees. We have developed employee courses for the improvement of skill; also some which are informative in nature, for example, orientation-type training.

We have numerous courses for supervisors, both informational and dealing with the techniques of supervision. We

have the mechanism for supervisor discussion in the refineries, as evidenced by our foreman conference programs. We have had some activity in the field of general meetings, such as those dealing with the annual report.

We see around us many companies who are doing things beyond our present scope of activity. We have examined carefully what is being done. The subjects discussed fall generally into these three categories: Free Enterprise, basic economics, or plain facts and figures about business. These subjects are being disseminated through literature, house organs, meetings, and frequently through fairly elaborate training courses.

The programs on the Free Enterprise system are aimed at teaching the merits of the system in order to create supporters and defenders for the American way of life. Many who favor a less direct approach teach basic economics. But, they do so from a point of view that by teaching principles they hope the individual will, in turn, accept the Free Enterprise system as the best way to apply his individual principles.

Other companies concentrate on explaining facts mostly of a financial nature and often with respect to business as a whole. When they do talk about figures dealing with their own company, the efforts are restricted mainly to figures based on an annual report.

It is interesting to consider the emphasis used in these various approaches. Most of the programs are characterized as being in themselves a counterattack against radical thinking or against distortions which have appeared in union publications. There is much of the element of feeling that "We're in a fight."

Elsewhere prime emphasis has been along the lines that a man should appreciate the benefits he is receiving. Comparisons are made with how poorly he would fare in other industries or in other countries. Sometimes efforts are made to get him to appreciate the role of the stockholder, and the difficulties of the management.

The emphasis in a few programs is purely on logic. It amounts to a presentation of facts on the soundness and propriety of business actions.

By far, the majority of the companies have been content with furnishing the story to the rank and file by the printed word. Their courses and direct approaches have been restricted to the supervisor.

After analyzing these efforts by others we have come to these conclusions. There seems to be no element of counterattack necessary in our activity. Nor is there any reason to crusade for any system (as such) or attempt to create feelings of appreciation. To do so is ineffective—and inconsistent with our company's philosophy.

Most of the mass efforts at education in the field of basic economics have seemed to be failures. Such courses are extremely dull. The few attempts we have seen to measure the net gain have shown most disappointing results. We have concluded that it is too complex a field and that little would be gained by attempting basic economic education on principles of the system. However, there is support for a short course in financial management to aid top executives understand the financial picture.

We must be cautious of efforts based upon merely furnishing information. This is not enough. We are out to secure understanding and with it real benefits in attitude. Often what appears as a misconception is a vocalizing of a poor attitude. Correcting that misconception through facts will only mean that poor attitude will be expressed in some other way.

Our responsibility

There is considerable debate over the extent to which management should accept responsibility in this field of education. There are other agencies sharing the social responsibility. Yet many contend that these other agencies are inept and that management must assume the responsibility for influencing the political and social beliefs of its employees toward the defense of the American way of life.

Past history shows that this company does not feel it is its responsibility to attempt to influence directly the political or social beliefs of its people. We hope the experience of our people under the Free Enterprise system, as practiced in this company, will be good. We hope this experience will aid their natural inclination to support the Free Enterprise system. However, we see no advantage in having the company accept a responsibility to crusade. Our job is to provide the proper type of internal communications. These communications should deal almost exclusively with information about the company.

The problem is more a normal evolu-

tion than a stirring up by radical elements. It has its origin in the isolation of the worker from the policy-making level of the company. Economic understanding is most difficult for the worker. We accept the responsibility that bigness requires that a company be particularly anxious to explain itself to its people.

There is a successful approach. There must be a series of favorable impressions reaching the individual over a considerable period of time in order to affect the direction of his thinking.

Also, in order to get his interest, it is absolutely essential to talk in the narrow point of view of "What is the effect on the individual." Too often we have talked about things which management felt would be interesting. It is fundamental that anything we do must show in itself how the problem affects the man; then any action must undertake to develop his confidence in the way the company is handling the situation.

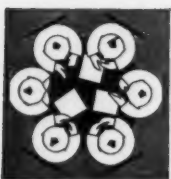
Our prime goal is the efficient operation of the business. This is strongly influenced by morale. Morale, in turn, is the sum total of the attitudes of our people. We must undertake to develop and maintain these favorable attitudes.

These attitudes must be based upon something concrete. They are strongest if based upon confidence; confidence in the company and its actions, in its leaders, and in its policies.

Confidence must have its foundation. We can't rely on faith alone, nor on past favorable experiences. Confidence to be a firm support must have as its foundation real understanding. We don't mean complete understanding of everything the company does. That is impractical. But, we do mean understanding of some of the more important business aspects close to the man. If we gain this, we'll get enough confidence to generate favorable attitudes when other matters come up which the man may not understand.

There is an abundance of survey evidence over the past few years which emphasizes the problem. There is a national pattern of thinking which cannot be ignored. Much of it emphasizes the areas in which better understanding is needed. There is quite a high percentage of misconception on the following items: on wage topics, on distribution of earnings, on ability to pay, on the prosperity of business, on profits, and many other allied fields.

In addition (*Continued on page 37*)



Industrial relations round-table

Prepared by
A. G. A. Personnel Committee

● **Mobilization of scientific and technical manpower**—Mobilize all of the nation's scientific and technical manpower between the ages of 18 and 65, in the event of an all-out war effort. This is the recommendation of the American Chemical Society in a report to National Security Resources Board made public late in December.

The chemists' all-out mobilization plan would transfer control over scientific manpower from Selective Service to a new civilian board. The plan would become effective only in a situation so grave as to compel adoption of a national service act—at least for technical personnel—under the provisions of the report.

For the present, the report says, optimum utilization of scientific and engineering skills within the terms of existing legislation should be sought through the modifications in procedure suggested to Major General Lewis B. Hershey, director of Selective Service, by his own scientific advisory committees. The central proposal of these committees is that superior university students be deferred from military service indefinitely to continue their studies. They would be deferred even longer if their training and capabilities are needed elsewhere in the defense program.

Although such changes in Selective Service practice promise some improvement, it will be difficult to assure an adequate, sound manpower policy under existing legislative authority, according to the Chemical Society. The report recommends "prompt enactment of supplemental or new legislation to meet present conditions."

National service does not seem necessary at this time, the report emphasizes. Nevertheless, it urges that the proposed legislation be so drawn that conversion to a total mobilization basis can be effected readily if changing conditions make this necessary.

Recommendations include: Congressional authorization for the registration of all scientists and engineers aged 18 to 65; establishment of a scientific and technical manpower reserve, and formation of a Central Scientific and Technical Board to supervise the use of technical personnel and advise the President.

● **Watch white collars**—Expanded operations for defense production mean new plants, new bargaining units and new union members. Something that's often forgotten is that the white collar groups expand just as fast as production units—and for recruiting purposes even ahead of them. The decline in birth rates of the early 30s already has left its mark in a present shortage of young learners and trainees. That means more and more older employees without office backgrounds are going to be sucked

in to the white collar work, and bring with them stronger traditions of trade unionism. Another factor, the drive to enroll white collar groups, is proceeding at a considerably more determined pace than during World War II. This makes the bargaining rights of office groups one area in which it is essential to understand precisely what the law allows.

● **Job applicants**—*Job applicants* and new workers are getting the royal treatment from employers. Macy's Department Store has a television set in its employment office. RCA has name bands play during lunch periods in its Jersey plant. Curtiss Wright has placards all over its reception rooms. SMILE say the signs. And the receptionist is a toothsome miss who meets every job hunter with a handshake and the friendliest of greetings.

But "*circus*" methods of recruiting new workers—sound trucks, helicopters, sky-writing—are frowned on by the government. Officials say channeling of personnel into defense jobs is more orderly and less wasteful when left to the State Employment Offices.

Communities hard hit by labor shortages during the last war are busy training women to take over jobs again. In Youngstown, Ohio, a heavy industry center, public schools have been giving refresher courses to women who worked during World War II, are prepared to fit thousands of others for defense jobs. Employers in areas where labor shortage looms might get in touch with their school systems, furnish skilled workers from their plants to act as instructors.

● **Escalator clauses in a wage freeze**—How would a wage freeze affect the wage prospects of employees covered by escalator clauses? On the basis of World War II experience, their wages would be just as frozen as those of employees not covered by such provisions.

But today more than a million workers are covered by union contracts that contain escalators. The United Automobile, Aircraft and Agricultural Implement Workers (UAW-CIO), a powerful union in several key wartime industries, alone is a party to escalator contracts covering more than 600,000 workers. Considering these facts, some labor observers believe that escalator clauses may be allowed to ride through a wage freeze. They see this as a strong reason why so many unions are willing to sign escalator-type contracts.

Other observers believe that any true wage stabilization order would necessarily put a lid on escalator wages. Even so, they view the GM formula as a possible substitute for the Little Steel formula of World War II: any wage increases granted under the GM formula up to the time of the wage freeze might be the yardstick for increases that other companies would be allowed to make.

● **Military leave policies**—Interested in studying the policies of other companies with respect to employees going into military service? You will find helpful information in the new National Industrial Conference Board study of the military leave policies of 180 companies. The survey covers such subjects as pension credits, group life insurance plans, hospitalization plans and profit sharing plans.

● **UAW-CIO asks new military service clause**—CIO Automobile Workers notified all its local unions of its new policies designed to protect members who are now in or who may be called into military service. Local unions were asked to take steps to insert clauses covering these seven points in their union contracts:

(1) Reemployment rights for returning servicemen, regardless of type of discharge issued them by military services.

(2) Reemployment rights for probationary employees.

(3) Returning servicemen to be guaranteed promotional opportunities granted during their absence in the armed services.

(4) Vacation pay for year of entrance and year of return from service.

(5) Pension credits for time spent in military service.

(6) Continuation of life, hospitalization and surgical insurance benefits during members' military service.

(7) Establishment of labor-management military deferment committee.

● **Greater unemployment benefits sought**—Liberalized state unemployment compensation laws will be a major objective next year, according to a CIO News report. Labor will campaign before 44 state legislatures for increased weekly benefits, a lengthened compensation period, allowances for dependents, and broadened coverage.

● **Human relations and labor unions**—The New York State School of Industrial and Labor Relations at Cornell University has undertaken a study of the human relations problems of labor unions. Two Dunkirk, N. Y. CIO Steelworkers locals are now participating in the project. The four-year plans include studies of other unions in other communities. Dr. Leonard R. Sayles, in charge of the field work, says that "we hope to develop materials that will help union officers to better understand their own problems and the problems of the rank and file."

● **Twenty shops buy Toledo plan**—The Toledo area pension plan has come into being. According to United Automobile Workers, CIO more than 20 shops with a total of 1,000 employees have signed up under a UAW retirement income trust fund. The plan calls for employer contributions of seven cents per hour for each employee, and pension benefits, including Social Security, of \$100 a month for employees aged 65 and

(Continued on page 28)

Taxes, and liberty, too?



By Harland C. Stockwell

Executive Secretary
The Civic Federation of Chicago
Chicago, Ill.

● The following article was prepared with the full realization that some of the viewpoints expressed might be outweighed by the imperative needs of national defense. Obviously, the American people face mounting tax burdens to pay for defense and increased costs of government. It is vitally important, however, that we study these taxes and the purposes for which they will be used.

Our country is now engaged in a relatively small "hot" war and an all-encompassing "cold" war which threatens to become "hot" at any time. All our energies and support must go to aiding the successful conclusion of these conflicts. Taxpayers must resign themselves to the imposition of ever heavier burdens by the Federal government for military purposes. We can only hope and pray that these burdens and the concomitant economic controls will be exclusively for military protection and will not result in the ultimate imposition of socialism or dictatorship.

One of the best definitions of taxes that I know is that of Bastable: "A tax is compulsory contribution of the wealth of a person or body of persons for the service of the public powers." It is important to remember that, without any qualification whatsoever, taxes are paid by *persons* and not by some impersonal entity.

"Liberty" and "Liberalism" are philosophical concepts and mean different things to different people. Fundamentally, however, they involve tolerance, industriousness and self-reliance. Liberty, to me, means the right of an individual person to work, think and worship as he pleases, with due regard for the rights of others. I believe that economic liberty is the foundation of all liberty—and that economic liberty is based on the fundamental right of a man to the product of his own labor.

With these basic concepts in mind, I would like to carry on a "conversation piece" concerning local, state and federal taxes—including in the latter category some matters which seem important relative to our capitalistic economy and the threat of its extinction.

Dr. Lewis H. Kimmel, in an article published late in 1949¹, shows that the ratio of tax collections to national income increased from 12.7 in 1930 to 25.4 in 1948. In the same period, the Federal ratio (exclusive of Social Security taxes) increased from 4.3 to 17.6 and the state

ratio from 2.2 to 2.9. The local ratio *decreased* from 6.2 to 3.3. Total tax collections increased from 10.3 billions in 1930 to 54.5 billions in 1948, with Federal collections in 1948 amounting to 37.6 billions (exclusive of 3.5 billions for Social Security), state 6.3 billions and local 7.1 billions. The tremendous overbalance in taxes in favor of the Federal government is clearly indicated by the figures.

I firmly believe that the present crushing, incentive killing, liberty-destroying tax load can lead only to socialism. That in turn is but a step from some sort of totalitarianism—whether Communist or Fascist does not make much difference. They are equally bad.

Local taxes

Using my home community as an illustration, there are some 385 separate property tax-levying governmental units in Cook County, Illinois. Included are the six which levy taxes within the City of Chicago. The six major governments of Chicago appropriate yearly in excess of one-half a billion dollars for carrying on their several functions. Over 70 percent of the revenue to finance these major local governments comes from the property tax—and property taxes for these governments have increased over 90 million dollars since 1939.

The greatest financial problem facing local governments today is how to meet rising costs of operation without hiking taxes to a point where taxpayers cannot, and will not, pay them. This problem can be solved by *reducing costs* or by securing *additional revenue*, or a combination of both. If additional revenues are used simply to *unreasonably increase* expenditure totals, then the securing of such revenues would be folly.

As a substitute for, or an adjunct to, new sources of revenue it is quite possible that we might do better with the money we already have. Here are some suggestions:

(1) *At least reasonably good personnel management*—This involves an adequate recruitment program, cooperative interest between operating departments and civil service commissions, practical service rating systems, in-service training programs and *proper classification of po-*

¹ Abridged version of talk presented before Accounting Section at 1950 A. G. A. Convention in Atlantic City.

² Page 153, *The Annals of the American Academy of Political and Social Science*, November, 1949. Lewis H. Kimmel.

sitions. Good personnel management has been achieved in many localities. It can and should be achieved in all localities.

(2) *Modern Purchasing Techniques*—Chicago's local governments have come a long way in the past few years in the installation of up-to-date purchasing systems. The city, county, board of education and sanitary district have all revamped their purchasing systems. An adequate purchasing system involves such matters as standard specifications, a commodity index file, proper testing methods, bulk purchasing, etc.

(3) *Fair Salary and Wage Rates*—It is the contention of The Civic Federation that governmental employees should receive the same compensation as is paid for similar work in private business and industry—but no more. We also urge that the more favorable perquisites and "fringe benefits" that obtain in public employment should be taken into consideration in arriving at local governmental pay scales. The local governmental employee (in Chicago at least) receives more liberal benefits than his non-public counterpart in relation to such matters as pensions, vacation pay, paid sick-leave, holiday pay, hours of work, etc.

Other means of preventing further local tax increases are:

(a) Mandatory provisions, with teeth

in them, for collecting long delinquent taxes, including special assessments.

(b) A slowing down of the rate of increase in local outstanding bonded debt.

(c) Reorganization of local public pension systems.

(d) Governmental reorganization and consolidation, both within and among governments.

If, in any instance, local taxes *must* be increased, careful thought should be given to the type of tax most equitable to all concerned. The Civic Federation is strongly opposed to the hidden, inherently racket-breeding type of taxing authority known as "general licensing for revenue."

If we want reasonably effective and economical local government and insist on it, we can have it. If we are not particularly worried about it, we'll never get it. Or once obtained, it shortly will be lost again.

State government and taxes

As a general average, of all direct taxes paid, state governments (like local governments) get about 12½ percent. The tremendous increase that has occurred in appropriations of state governments is exemplified by appropriations of the State of Illinois which increased 689 percent in the 28-year period from 1921 to 1949. Since the cost of living in the same period increased only 35.7 percent it is evident that new or expanded activities accounted for the major share of the increased appropriations.

Despite the tremendous increase in the revenue and expenditures of states that has already occurred, state officials look forward to still greater expenditures. In view of the already staggering burden of taxation, states should make every effort to reduce expenditures rather than to increase taxes.

Welfare services—Since they constitute a substantial part of state expenditures, careful, impartial studies of payments for welfare services should certainly be made prior to asking increased taxes.

State taxpayers—property, sales, cigarettes, or what have you—should be vitally interested in seeing that only those who are entitled to the various forms of relief receive it. And every state taxpayer should be on his guard to see to it that his state never gets into the same muddle as the State of Washington, where it is reported possible for a man to quit a \$360

a month job and receive \$433 on the dole.

The several state governments still have primary control of unemployment compensation systems, but there is strong evidence that the Federal government would like to take over.

Charles Stevenson, in his article on "Chiselers Endanger Our Unemployment Insurance Program," states that "Unless public spirited citizens, employer and employee alike, assert themselves, the entire insurance plan faces ruin. Some 12 billion dollars have been paid to date. The basic idea was sound: to provide temporary aid for persons who become unemployed through no fault of their own while they searched for new jobs."

The article cites instance after instance of poor administration, chiseling and cheating. Unemployment insurance represents part of the cost of doing business—and that cost is passed on to the consumer. Do consumers approve of the attitude reflected by two items appearing in the *Detroit Free Press*—same day, same page?

Item No. 1: Man sentenced to jail for 90 days for stealing 40 cents from newsstand.

Item No. 2: Four persons put on probation for stealing \$868 from Michigan unemployment insurance funds by claiming benefits while they were working.

The same judge presided at both trials. Cannot workers themselves see that each fraudulent claim paid steals money from those who may have just claims?

Many states are now bending every effort to eliminate chiseling from unemployment insurance. The greatest calamity that could befall the system would be to hand it over to the government.

Federal Aid—It is not possible today to devote the space to this subject that it deserves. Suffice to say that the term itself is a snare and a delusion. No state is "aided" by as much as it contributes to the Federal government. "If the upward trend of Federal aid continues," says the Council of State Governments, "there is little likelihood that any considerable tax reduction will occur in the fields suitable for state and local taxation."

Furthermore, the state will become constantly more dependent on Washington. Remember, when Uncle Sam plays Santa Claus, it's the taxpayer who holds the bag.

No one of us understands all of the intricate prob- (Continued on page 40)

Public relations

● "The trouble with public relations is that most people in it don't belong there."

This observation was made recently by an expert in public relations. It started a lively discussion about public relations—counselors and hired company help particularly. Take note:

"Too many don't know business, yet selling business is their job."

"Too many offer only good publicity techniques and 'connections' as their chief assets."

"Too many exercise unnecessary publicity supervision and censorship."

"Too many build themselves into the company, instead of building management and employees to be good-will ambassadors."

"Too many are Life-, Look- and Fortune-conscious."

"Too many try to give companies artificial personalities."

"Too many don't know the importance of the business-paper press, high-hatting it and treating it shabbily."

"Too many are servile to management, instead of serving it."

—Printer's Ink

Conference to cover emergency



A.G.A. Program and Papers Committee developing plans for the 1951 Conference on Industrial and Commercial Gas: (Clockwise around table) W. S. Anderson, H. A. Sutton, R. A. Malony, F. T. Brooks, chairman; M. A. Combs, H. A. Clark, P. R. Dreyer, G. E. Duane and H. O. Andrew

Two major themes head the agenda for the Section's 1951 Sales Conference on Industrial and Commercial Gas. Sessions will be held at the Shoreham Hotel in Washington, D. C., on April 2-4.

High ranking government representatives are expected to advise the delegates on how best to sell to government agencies or deal with procurement offices. Speakers will also discuss how to improve mass feeding methods based on the experiences of the armed services.

Leading industrialists will outline what lies ahead for the country under the mobilization program. A prominent gas industry executive will discuss the prospects for the gas industry during the coming months, and an executive of a gas equipment manufacturing company will cover prospects in the industrial and commercial gas field.

Opening day of the conference has been designated as Commercial Gas Day. This will be followed by an all-day general session with a dinner in the evening. The conference will wind up with an Industrial Gas Day on April 4.

Tentative plans for Commercial Gas Day include a special workshop presentation that will dramatize commercial gas cooking. Up-to-date facts and figures developed by studies of competitive services will be presented. A speaker recommended by the Appliance Servicing Subcommittee of the A. G. A. Food Service Equipment Committee will give a paper on appliance servicing that is necessary to "Keep 'Em Cooking With Gas." Commercial water heating of all types will be the subject of another presentation. Rounding out the commercial program, a leader

in the restaurant association field will discuss gas company relations with local associations.

A diversity of important subjects will be covered on Industrial Gas Day including: Radiant Heat in the Glass Industry, commercial heat treating, die cast metal melting, latest developments in the use of air heaters, and special uses for radiant tube furnaces.

In addition, there will be a two-part research presentation on "Heat Treatment of Steel by Gas vs Induction" and "A Review and Forecast of Industrial and Commercial Gas Research."

The advance program together with hotel reservation information will be in the mail to Section members before the first of March. Members should plan now to attend this important conference geared to the defense economy.

Production theme of Industrial Gas School

HOW CAN the gas industry help to meet mounting fuel requirements of the national defense program? What new and improved applications of gas are available in the processing field?

These and other questions of current interest will be discussed at the Association's 1951 Industrial Gas School at the William Penn Hotel in Pittsburgh the week of May 14. Chairman Terry Hart and his Sales Training Committee have developed a stimulating five-day advanced and refresher course for industrial gas men.

Anyone concerned with industrial gas processing, including plant and production engineers of large industrial consumers, is invited to attend the school sessions. New men in the industry will find the courses of material assistance in their everyday contacts with industrial gas customers and prospects.

Particular emphasis will be placed on means of increasing the efficiency of older industrial gas installations. New practices will be discussed that can increase production and insure better products.

Instructors will also outline the principles of gas combustion, burner operation, use of prepared atmospheres and other applications of gas in industry. This information should be particularly helpful to plant men in charge of industrial gas equipment.

Gas companies are urged to have their industrial customers enroll plant equipment men in the A. G. A. school. Complete information, including the program, registration blanks, and requests for hotel space, will be mailed to member companies at least six weeks before the school opens.

Corrosion by stray currents

Corrosion engineers use stray currents from street railway and mine haulage systems for free cathodic protection

By N. P. PEIFER*

Chairman

Corrosion Subcommittee No. 1
American Gas Association

Corrosion of underground structures is generally caused by the flow of electric current leaving the surface of the metal to flow to the earth. This electric current can be self-generated, in which case it causes galvanic current corrosion. Or it may originate from some external source such as electric railway or mine operations, manufacturing plants or from cathodic protection installations. This is called stray current corrosion.

Regardless of source, when an electric current flows from a metal structure to an electrolyte or earth, metallic ions will migrate from the metal causing corrosion of its surface.

The source of the current for street railway or mine haulage systems is the sub or generator station. In operation the electric current will flow from the positive terminal of the generator to the trolley wire, through the electric motors of the cars to the rail and back to the negative terminal of the generator by way of the rails.

Under best conditions the rails are poorly insulated from the earth. This permits leakage currents to flow from the rails to the earth and to any underground structure that may be in the earth in the

vicinity of the rails (Figure 1). These structures, such as pipelines, will act as parallel conductors to the rails, carrying the current to a point near the sub station. The term "negative area" is used to define the area where the current is flowing from the earth to the underground structure. To determine this, a voltmeter with the positive terminal connected to the pipe and the negative terminal connected to the rails will show a deflection to the negative side of the meter if the pipe is in the negative area. It will show a deflection to the positive side of the meter in the positive area.

The pipeline is cathodically protected in the negative area and corroded in the positive area. At locations where the pipelines are not connected to the rails or negative terminal of the generator it will generally be found that they collect current for 60 percent of the distance be-

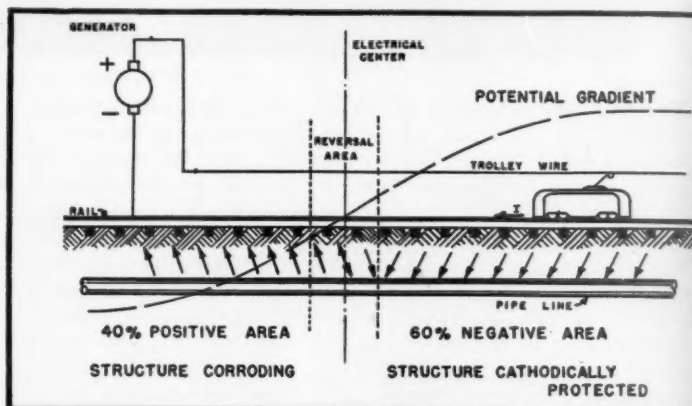


Figure 1. Under best conditions, the rails are poorly insulated from the earth. Leakage currents flow from rails to the earth and any underground structure nearby

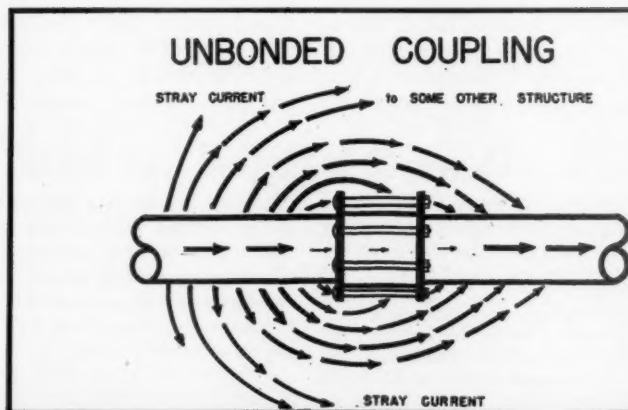


Figure 4. Couplings should be bonded, otherwise current flowing on the pipeline will leave and flow through earth at upstream end of coupling, causing corrosion

* Engineer, The Manufacturers Light and Heat Co., Pittsburgh.

tween the sub station and the end of the rails. Current will flow from the pipe to the earth for the balance of the distance, or 40 percent. The point at which greatest corrosion will occur will be at or near the sub station. The pipe is said to have a higher positive potential to the rails at this point. If the current from the pipelines could be caused to flow through some other path than the earth, the corrosion in the positive area could be stopped.

A properly engineered mitigation system will provide the path for the returning electric currents by the use of a current removal wire connecting the pipelines to negative side of generator.

Installation of this wire accomplishes two purposes: It removes the current gathered in the cathodic or negative areas, and also increases the distance in which the pipeline is cathodic or negative to the rails (Figure 2).

In some locations, additional protection to the pipelines is secured by the simple installation of a resistor between the rails and the negative terminal of the generator. This type of installation is used in many parts of the country. It causes the pipeline to be cathodic to the rails at all points (Figure 3).

Where stray currents flow on a pipeline there is always a hazard created when the pipe is cut. A spark may be caused when the line is separated, igniting the contents of the line if they are of an explosive nature. Installation of an electrolysis mitigation system will cause an increase in the amount of current that is flowing on the pipelines and, while the size of the spark will be greater, it would occur even with the small amount of current that was flowing on the line previous to the installation. The procedure in both cases is to educate plant personnel in

safety practices.

Several factors are important when mitigation systems are contemplated on existing distribution and transmission lines. The continuity of the pipeline considered as an electric conductor must be complete.

Dresser or other type couplings that are not bonded will constitute a hazard (Figure 4). The current flowing on the pipeline will leave it to flow through the earth at the up stream end of the coupling, causing corrosion. On the down stream end of the coupling the current will return to the pipe.

The mitigation system should be of cooperative nature in which all owners of underground structures work together. Otherwise some structures may be damaged.

Use of protective coatings in the original positive areas may sometimes be hazardous. A break in the current removal

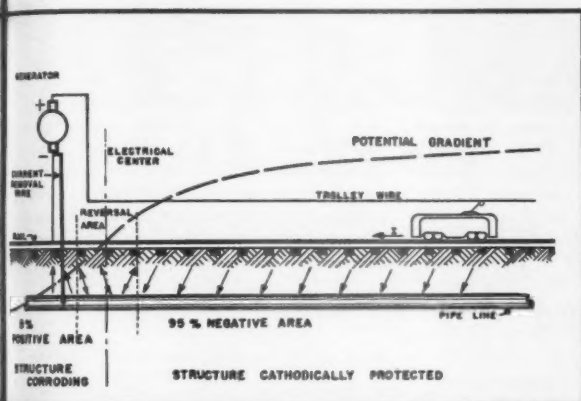


Figure 2. Good mitigation system provides path for returning electric currents by removal wire connecting pipelines to negative side of generator

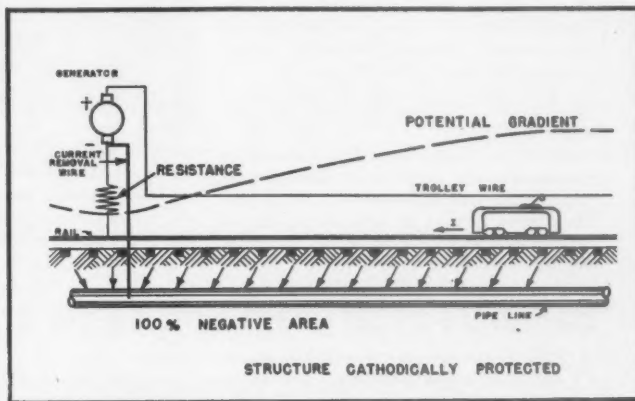


Figure 3. Often additional protection for the pipeline is secured by use of a resistor between the rails and negative terminal of generator

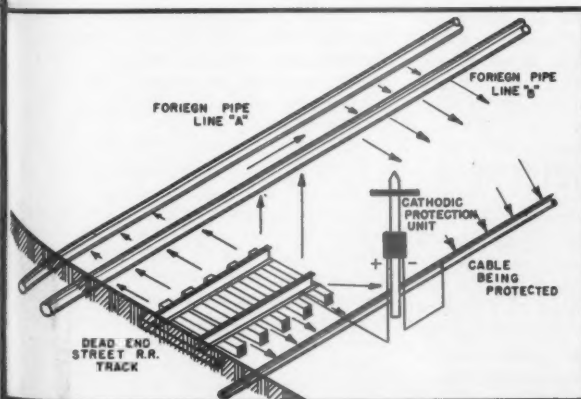


Figure 5. After trolley systems are removed, cathodic protection rectifiers can be used if other structures are protected against current

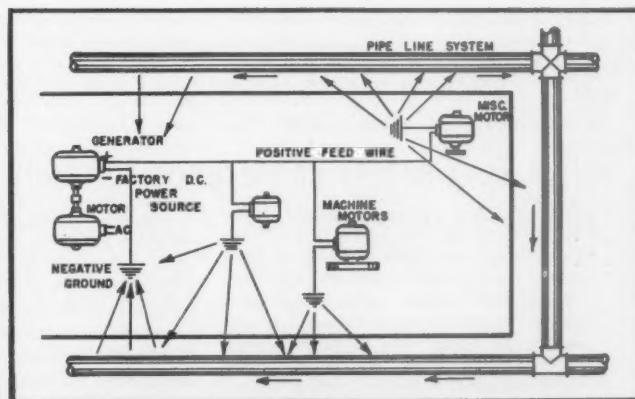


Figure 6. Industrial plants using direct current may be source of stray currents that adversely affect pipelines. Effect is generally local

cable at the sub station could cause an excessive amount of current to flow to the earth at the breaks or faults in the coating, causing accelerated corrosion at these points. In the negative areas, protective coatings may be beneficial because they reduce the amount of current that can flow to the pipeline. Faults or breaks in the coating in these areas will be cathodically protected by the currents flowing on to the pipe.

Replacement of electric operated trolley systems by gasoline operated buses is causing corrosion failures at locations where no corrosion has been experienced before. The cathodic protection provided by the railway systems has been removed and the action of the soil on the under-

ground structures causes the formation of galvanic cells on their surface.

To stop this corrosion, some companies are installing cathodic protection rectifiers that will again cause electric currents to flow from the earth to their pipes or cables. Where this type of protection is installed, care must be taken that some other structure does not pick up this current (Figure 5). The foreign structure may be cathodically protected where the cathodic interference currents flow to its surface. It will be corroded where these currents leave its surface to flow back to the cathodically protected structure. The only remedy for this type of interference stray current corrosion is cooperation between owners of underground structures.

Manufacturing plants using direct current may be the source of stray currents that adversely effect pipelines. This is particularly true where only one wire is used between the generator and the operating equipment and the earth is used as the return circuit (Figure 6). The corrosion caused by these currents is similar to that caused by street railway operation. The effect is generally local although the currents may be of large value.

Stray currents from street railway and mine haulage systems were once considered as detrimental to underground pipe systems. The present day corrosion engineer recognizes that they can be a source of free cathodic protection and he is using them as such.

Corrosion instrument book near completion

INSTRUMENTS are important tools of the corrosion engineer. They are indispensable for making periodic surveys of underground gas lines to determine whether they are adequately protected against corrosion hazards. This fact was reported at the recent organization meeting of the Corrosion Committee in New York under the chairmanship of A. H. Cramer, Michigan-Wisconsin Pipe Line Co., Detroit.

These instruments include voltmeters to measure the pipe potential in volts referred to surrounding earth, ammeters to determine the current flowing in cathodic protection installations, and instruments for measuring electrical resistance of coatings and sub-

face soils. Those are a few of the more usual types. High voltage holiday detectors are used to locate faults in coatings before pipe burial, and pipe locators for marking the location of pipes after burial.

To assist gas utilities in selecting the best instruments for corrosion surveys, the Subcommittee on Instrumentation, M. C. Miller, Ebasco Services, Inc., chairman, is assembling an instrument reference book. This will contain manufacturers' descriptive material on their products, and instructive articles on the use of these instruments. This reference book is expected to be completed in time for distribution at the A. G. A. Distribution,

Corrosion and Motor Vehicles Conference in Memphis, April 16-18, 1951.

One of the luncheon conferences of the Corrosion Committee at the Memphis meeting will be devoted to a display and demonstration of the various types of instruments used in corrosion work. This will be supplemented by an informal discussion period. Questions on corrosion instruments and measurements will be answered by engineers experienced in corrosion surveys. This conference should be of great value, particularly to companies that are embarking on a corrosion control program and planning to make the best investment in instruments.

Baltimore department wins safety award

ATOTAL of 2,263,561 consecutive manhours without a disabling accident! That is the record set by the fitting department, Consolidated Gas Electric Light and Power Co. of Baltimore, between June 25, 1948 and August

6, 1950.

American Gas Association honored this unusual record last month by presenting its Safety Merit Award Certificate to the Baltimore company. The award was made through

the A. G. A. Accident Prevention Committee, W. H. Adams, The Manufacturers Light and Heat Co., Pittsburgh, chairman.

R. H. Coleman is safety supervisor of the Baltimore utility.

Conservation theme of safety meeting

THE NECESSITY for manpower conservation will keynote the twelfth annual Southern Safety Conference in Birmingham, Ala., March 4-6. Headquarters will be at the Tutwiler Hotel.

According to J. L. Shores, executive vice-

president of the conference and manager of safety for Alabama Power Co., "this will be a safety man's safety meeting. It will be designed to give suggestions on accident prevention which are applicable to specific situations and causes."

Two-day section meetings on safe practices have been scheduled for March 5 and 6 covering industries including the utilities. J. O. Speed, transportation superintendent, Birmingham Electric Co., is conference vice-president for industry.

New York safety conference to study defense

NEW YORK'S twenty-first annual Safety Convention and Exposition will be held for four days beginning April 3. Special emphasis will be placed on problems of civil defense.

Two hundred safety experts from many parts of the country will address the 53 sessions at the Statler and Governor Clinton Hotels. The convention, which draws an annual attendance of 10,000 to 12,000 persons, is sponsored by the Greater New York Safety Council with the aid of 62 national and local cooperating agencies.

The home safety sessions and those arranged by the Atomic Energy Commission will cover civil defense to a greater extent than before. Many of the other sessions will also take up new problems arising from the possibility of attack upon American cities. Arthur W. Wallander, New York City's civil defense director, will address the convention. The petroleum industry, for instance, will devote a meeting to the problem of transporting gasoline under aerial attack.

Latest techniques in accident prevention and methods of education in safety in the home, industry, traffic and all other fields will be discussed and prepared papers delivered by authorities from most states of the union. John Cost, director of plant and personnel supervision, New York Telephone Co., is general chairman for the convention. George E. Decker, senior engineer, Aetna Casualty & Surety Co., heads the program committee. Gas industry and National Safety Council representatives will attend the conference.

Twin bill for Eastern Natural



George L. Scofield (left), chairman, and Lee Corn, vice-chairman of the council which is preparing for A. G. A. Eastern Natural Gas Regional Sales Conference

Where do we go from here in promotion and advertising? What is the role of gas company sales and home service departments in the present emergency?

These and other timely questions will be answered during the Association's Eastern Natural Gas Regional Sales Conference at the William Penn Hotel in Pittsburgh, March 26 and 27. The two-day program will provide a close examination of existing conditions for the benefit of gas company sales executives, sales managers and gas appliance manufacturer representatives.

Details of the advance program have been organized by the Eastern Natural Gas Regional Sales Council under the chairmanship of George L. Scofield, Republic Light Heat & Power Co., Buffalo, New York. Mr. Scofield will preside at the first morning session. The Council vice-chairman, Lee Corn, The East Ohio Gas Co., Cleveland, will preside on the second morning.

Opening event on the tentative program will be a stimulating review of the gas industry's growth by President D. A. Hulcy of A. G. A. Mr. Hulcy is expected

to interpret recent developments and add his suggestions for meeting the new emergency conditions.

What is the role of the appliance dealer in the present situation? W. D. Williams, assistant to sales manager, Public Service Electric & Gas Co., Newark, N. J., will attempt to answer this question. He will discuss his company's dealer cooperation plan and recommend steps that the industry should take to achieve closer dealer liaison.

A third Monday morning speaker, L. F. Worth, sales manager, dryer division, Bendix Home Appliances, Inc., has been invited to discuss the automatic gas clothes dryer. His comments will cover the present market situation, activities of gas laundry dryer manufacturers, and recommendations for industry action.

Promotion and the range in action will be the themes for the Monday afternoon session. Christy Payne, Jr., vice-president, The Peoples Natural Gas Co., Pittsburgh, will be presiding officer.

Members of the Association's Promotion Bureau will bring the audience up-to-date on A. G. A. sales, advertising and promotional programs for the coming months. This dramatic presentation will

show how continued aggressive promotion is needed to keep the gas industry abreast of changing conditions.

Home service departments are in a strategic position to tell the efficiency story of gas and gas products. Pointers on this subject will be demonstrated by three home service leaders from Pittsburgh—Flora Dowler, The Manufacturers Light and Heat Co.; Kathryn Barnes, Equitable Gas Co., and Ruth M. Severson, The Peoples Natural Gas Company. This event will take the form of a dramatic gas vs. electric range demonstration. This will be followed in turn by a question-and-answer period.

Opening the Tuesday morning session, W. L. Hayes, general sales manager, Montana-Dakota Utilities Co., Minneapolis, will tell how to keep the public sold on gas. He will show, for example, that this is as much an industry responsibility today as it was a year ago.

Television is an increasingly important medium that should not be overlooked. Its role in sales and promotion, how television should be used by the gas industry, and the results that can be expected, will be discussed by Lance Lindquist, Ketchum, MacLeod & Grove, Pittsburgh.

Final event on Tuesday morning will be a talk on the *McCall's* Kitchen Contest. Albert MacNamee, special representative, McCall's Corp., has been invited to detail the magazine's program.

Final afternoon of the conference has been set aside for a special panel discussion of the current sales picture. Irving K. Peck, vice-president, The Manufacturers Light and Heat Co., will act as moderator for a panel of the following conference speakers: W. D. Williams, L. F. Worth, W. L. Hayes, Lance Lindquist, H. V. Potter (A. G. A.), Jessie McQueen, home service counsellor for A. G. A. and H. Leigh Whitelaw, managing director, Gas Appliance Manufacturers Association, will complete the panel. Miss McQueen will discuss home service activities, while Mr. Whitelaw will cover materials, production and related subjects.

Round-table

(Continued from page 20)

with 25 years' service in the participating shops. The plan allows transfer of pension credits from one shop to another through reciprocal agreements.

The idea of an area plan came from Richard T. Gosser, an international vice-president of the UAW. He reasoned that a group of small shops could provide collectively the \$100 a month pensions that the individual shops could not afford. So far, however, the UAW has not been able to sell this idea to 40 other shops which were approached at the same time as the ones that did join. These shops say that their costs, personnel, and other problems are individual and dissimilar. And they are not at all certain that the contribution of seven cents per manhour will not be raised once everyone is in.

● **Multi-employer bargaining**—In a recent union contract survey made by Bureau of Labor Statistics it was determined that only one-third of the 3,376 contracts studied involved more than one plant or one employer. More than 70 per cent of the four million workers were covered by such agreements. Multiple-employer or association bargaining was found to be most prevalent on the West Coast where almost one-half of the contracts were of this type.

● **Union's right to employer's wage survey of competitors**—An employer who made a survey of wage rates paid by his competitors and used it as an instrument for refusing a wage increase is held obligated to make the survey available to the union.

A trial examiner of the Labor Relations Board declares that this conclusion flows logically from the Board cases in which it was repeatedly held that a union must be given all necessary information to permit it to bargain intelligently. This duty to furnish information to the union is part of an employer's obligation to bargain in good faith under the Taft-Hartley Act.

While finding that the employer refused to bargain in good faith by denying the union access to its wage survey, the examiner refuses to find a lack of good faith on the part of the employer in the latter's failure to execute in final form all nonwage matters agreed on during negotiations. The employer had a right to hold off final commitment on these issues for trading purposes, until the wage matters were also agreed to.

● **Revision of Consumers' Price Index**—January 11, 1951 marked the beginning of a new phase of the Bureau of Labor Statistics' job of bringing the Consumers' Price Index up to date. More than 17,000 families representing all income groups will be interviewed before April 30 to determine their 1950 buying habits. This will show what families in different income groups actually paid for food, clothing, etc. The general revision of the index in 1952 may result in a change of its base period from 1935-39 to a period following the war, according to the Bureau.

● **Do employees want to talk things over?**—How many employees, given the oppor-

tunity, wish to sit down with their supervisors to discuss themselves and their jobs? The Northwestern Mutual Life Insurance Company of Milwaukee, Wis., wondered about the answer to this question as applied to its own organization. It studied the merit-rating reports covering a full calendar year. During this period, 828 employees were rated by their supervisors and, in accordance with the union agreement, were invited to talk things over. Only 38 employees declined the invitation extended to them by their supervisors!

Details of this bit of research are contained in an article in the December *Management Record*, National Industrial Conference Board.

● **Giving donations—wisely**—Although it is generally recognized that there are many "charity rackets," few people realize that as much as perhaps \$100 million is lost annually by givers and philanthropy alike to these rackets. Much of this loss conceivably could be saved if more companies adopted intelligent and well-rounded policies for giving.

The National Industrial Conference Board's *Studies in Business Policy*, No. 49, "Company Policies on Donations," discusses the standards employed by management in screening requests from charitable and other soliciting agencies. Statements of policies followed by 19 companies are included.

● **Employees spend "millions" to learn about business**—After they have been employed six months, girls in the commercial department of Bell Telephone Company of Pennsylvania are given a chance to organize their own phone company. With the help of a model city, called Jonesville, and thousand-dollar bills (stage money), the girls elect officers and float stocks and bonds. They estimate revenue and rates, pay operating expenses, taxes, interest, and provide for depreciation. The board of directors declares a dividend at the end of the year. The Jonesville project is just one phase of the company's economic education program.

● **Annuity + "E" bonds + Gulf stock = security**—Gulf Oil Corporation put into effect in October its new trustee Employees Savings Plan affecting 30,000 eligible employees in the United States earning up to \$9,000 a year. The plan has three major features: an annuity fund, a savings fund and a stock bonus fund. Membership in the latter two is contingent on employee contributions to the first. Under the annuity feature, the employee contributes up to three per cent of earnings. The company matches these contributions. In addition, the employee can contribute up to four per cent more of his earnings to the savings fund, which is invested by the company in "E" bonds. For each employee dollar contributed to the savings fund, the company invests 50 cents in shares of Gulf Oil common stock, distributing this stock as a bonus at the end of each three-year term.

Employee contributions to the plan started as of October 1. Gulf dated this plan January 1, 1950 and made its own contribution retroactive to that date, thereby insuring the plan a flying start.

● **Company information on wallet cards**—If the Cleveland Graphite Bronze employee seems to have all the statistics concerning his company on the tip of his tongue, he probably has taken a peek at a card carried in his wallet. On both sides of the card (2½ by 3¼ inches), the annual report for preceding year is presented in summary form.

How much taxes did the company pay? How much was paid out in dividends? How many employees are there in the company? How many stockholders? How much money did top management get last year? The card tells, so the employee has all the answers. Wallet cards are given to all employees.

● **Hogging the prize**—The "messy pig" angle is one that usually gets a workout when a company sponsors a good-house-keeping contest. But most often the analogy is limited to word and picture. One of Owens-Illinois Glass Company's plants recently took the whole promotion campaign one step further. The care and feeding of a real live pig for a week was the penalty one department paid for finishing last in a plant good-housekeeping drive. Apparently the grim reminder of a live, caged pig in the department worked wonders. Company officials say the appearance of all departments has improved greatly since contest began.

● **Junior executives held underrated**—Top management in most companies is no longer a one-man job, but most corporations are underrating the capacity of juniors to assume responsibility. The view is set forth in "Executive Action," a book published by the division of research, Harvard Graduate School of Business.

The conclusions were reached after a study of human problems of administration in 12 companies with annual sales ranging from \$5 million to \$250 million and observations and data from various other concerns. The researchers were Professor Edmund P. Learned and two associates, David N. Ulrich and Donald R. Booz.

In companies studied, where a rapid state of growth existed, "the fact that one or a few men could no longer make all the major decisions and manage the enterprise by themselves was gradually being accepted," the book said. When responsibility is delegated to competent juniors, top executives achieve an increase in their own effectiveness, it was declared.

The need for spreading executive responsibilities has grown, the researchers said, because of the complications introduced into modern business life by competition, government, regulations, labor unions and by the increasing complexity of the industrial process itself. Many companies, the book reports, have formed executive teams to meet increased demands on modern business leadership.

The study was conducted to examine the problems that the individual executive faces in finding adequate time, attention and personal skills to deal with the human aspect of his work. The book notes that building organizations that will operate effectively and also provide persons with satisfying activities is a continuous process.

Industry news

New standard for piping and installation

A NEW AMERICAN Standard for the installation of domestic and commercial gas piping and gas appliances has been published and is available from American Gas Association Laboratories. It represents the unified viewpoint of both A. G. A. and National Fire Protection Association. Publication followed

approval of the text by American Standards Association on December 5, 1950.

The new standard, "American Standard Installation of Gas Piping and Gas Appliances in Buildings," represents a complete revision of the former "A. G. A. Requirements and Recommended Practices for House Piping and Appliance Installation." The text was adopted by ASA Sectional Committee Z21, A. G. A. Approval Requirements Committee in March 1950 and by National Fire Protection Association in May. It replaces the proposed American standard published and distributed under date of March 7, 1950.

In preparation for the adoption of the new standard by American Standards Association, two former standards were withdrawn by mutual agreement. These were the "Gas Safety Code for Installations and Work in Buildings" (American Standard K2-1927), jointly sponsored by American Gas Association and National Bureau of Standards; and "Installation, Maintenance and Use of Piping and Fittings for City Gas" (American Standard Z27-1933) sponsored by National Fire Protection Association. Interests of these sponsors are fully represented on the A. G. A. Approval Requirements Committee which is also a Sectional Committee of American Stand-

ards Association. Consequently, complete cooperation was achieved in formulating the new requirements.

The new requirements are national in character. As such they are sufficiently general in scope to cover local policies in accordance with good practice. They apply to piping systems in buildings for low pressure gas, not exceeding 1/2 pound per square inch. They cover the installation and operation of residential and commercial appliances supplied through such systems by public utilities supplying fuel gases such as natural, manufactured and liquefied petroleum-air gases or their mixtures. They do not apply to systems distributing undiluted liquefied petroleum gases nor to those serving any industrial applications.

For the convenience of those actively engaged in the installation of piping and appliances, publication is in pocket size. The text includes separate sections on general features, piping installations, appliance installation, installation of specific types of appliances, venting of appliances, procedures for placing appliances in operation, and definitions.

The new standard may be secured from A. G. A. Laboratories, 1032 East 62 St., Cleveland, Ohio, 25 cents a copy.

GAMA reports 1951 gas appliance outlook

BUSINESS OUTLOOK for the gas appliance industry in 1951 is shown in a special survey completed by Gas Appliance Manufacturers Association.

Current expectation of reporting companies is that gas appliance and equipment production in 1951 will drop 25 percent below the record levels of 1950. Companies representing

64 percent of total gas appliance shipments last year announced that they expect to convert part of their plants to defense work. Approximately 28 percent of the facilities of these companies will be devoted to defense production during the current year.

The survey shows that despite these anticipated cuts in production of civilian goods,

the reporting companies feel that continued aggressive promotion is required. Most of the companies reporting to GAMA expect no change in their promotional and advertising activities during 1951. Significantly, however, companies with 29 percent of last year's production expect to increase their promotion and advertising from ten to 100 percent.

Record residential air conditioning contract

LARGEST contract ever negotiated in the United States for residential air conditioning was signed in Cincinnati recently for the nation's first air conditioned subdivision—also in Cincinnati.

The project was arranged through the combined efforts of The Cincinnati Gas & Electric Co., the *Cincinnati Times-Star* and Robert H. Wachendorf Co., builders.

Every home in the Meadowridge subdivision, a Wachendorf project, will incorporate Servel all-year air conditioning. The contract, largest ever signed by Servel, calls for 175 or more of the units. It will represent an outlay, including installation, of more than \$700,000.

In signing the record contract Mr. Wachendorf expressed the opinion that "any house being built today without air conditioning, will be obsolete before it is finished."

At a luncheon following signing of the contract, Walter C. Beckjord, president of the utility, commended Mr. Wachendorf on being the first builder in the U. S. to plan an entire subdivision with every house equipped with air conditioning.

He also recalled that Mr. Wachendorf included gas heating in every home in his Roselawn subdivision of more than 1,000 homes.



Signing largest residential air conditioning contract: (Left to right) A. P. Barton, Mutual Manufacturing & Supply Co.; Walter C. Beckjord, president, The Cincinnati Gas & Electric Co.; Louis Ruthenburg, chairman of the board, Servel, Inc., and Robert H. Wachendorf, builder

Utility's coal stocks surveyed by air

A NEW aerial mapping method has been used by Philadelphia Electric Company to inventory coal supplies in ten stockpile areas. The system proved accurate within three to five percent, and provided the inventory figures in a matter of days instead of weeks. Survey by air cut the inventory costs by 25 percent.

The company's total coal stock is more than 500,000 tons, which is stored in ten different locations. Some of the stockpiles are as large as 85,000 tons.

Philadelphia Electric knew that aerial mapping had been used successfully for reservoir studies, for locating transmission line surveys, and for distribution maps. Why not use it to check coal stocks?

Accordingly, the company asked Aero Service Corporation of Philadelphia to look at

costs and time schedules. It was determined that a pair of aerial photos would provide the coverage needed for each site, and that the necessary photo-flights could be executed in a few hours.

Ground control required four elevation points and two horizontal points for each location. Compilation of the topographic maps with precise optical machines would require a week or ten days after photography and field control were completed.

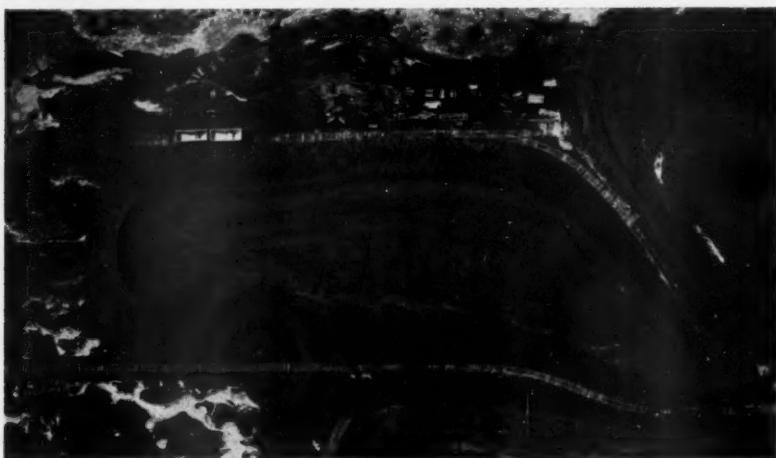
On the day of the flight, the utility's personnel watched for the survey plane so that the exact time the inventory photos were made could be recorded. This was an important factor in later computations. The plane flew over at an altitude of 1,200 feet.

Each nine by nine-inch aerial view covered approximately 75 acres. They were photo-

graphed as overlapping stereo-pairs, which enabled mapping compilers to trace the contours for each stockpile with the aid of a special stereo-plotting machine. In this way, a three-dimensional view of the terrain was obtained so that the contour at each height could be plotted fully.

After this plotting was completed, the area for each contour was measured with a polar planimeter. With these data the cubic volume for each "layer" or segment of the pile was computed. The total volume is the sum of these layers. Since computation is made from peak to base in sequence, it is self-correcting, and the total possible error for each pile is within three to five percent.

To establish the tonnage for each pile, the company determined the unit weight of the coal by sampling.



Aerial photograph of a Philadelphia Electric Company coal stockpile taken with the aid of ground control points. Overlapping pairs of aerial photos are used in tracing contour maps



Biron Ganser, manager of the internal audit division, Philadelphia Electric Co., checking results of air inventory of ten coal stockpile areas with Miles Higgins, a member of his staff

Texas Gas program

TEXAS Gas Transmission Corp., Owensboro, Ky., is increasing its daily natural gas deliveries by 60 million cubic feet.

The increase is made possible by completion of a compressor station construction program begun several months ago.

Earlier this year, the company announced a \$42.3 million pipeline construction program to meet increasing emergency needs for natural gas of plants and labor forces devoted to production of military material. This program, calling for construction of 580 miles of large diameter pipeline, would raise the company's daily deliveries by 200 million cubic feet to 900 million cubic feet daily.

The company is also embarking on a 939,000 underground gas storage program.

Merger in Illinois

WESTERN United Gas and Electric Company and Illinois Northern Utilities Company will be merged into Public Service Co. of Northern Illinois.

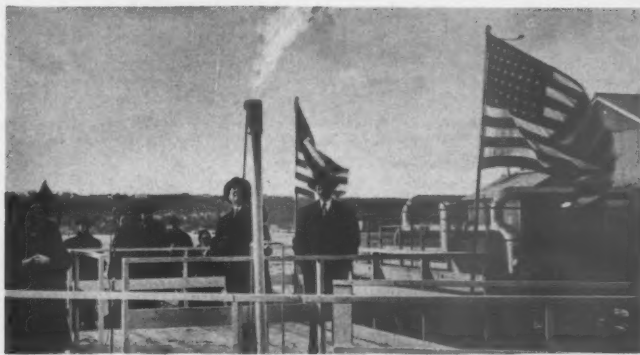
In announcing the merger, Chairman Charles Y. Freeman noted that from 1940 to 1950 the electric load of the three companies increased 134 percent and the gas load more than 200 percent.

Britton I. Budd, president of Public Service Co., will direct the operations of the enlarged organization. Murray D. Smith of Western United and George Fluehr of Illinois Northern, will continue to direct their organizations as operating divisions of Public Service Company.

PCGA Proceedings

PACIFIC COAST GAS ASSOCIATION has just published its 1950 *Proceedings*. The 216-page volume was compiled and edited by Clifford Johnstone, PCGA managing director, 447 Sutter St., San Francisco. Included are records of the association's business, accounting, manufacturing, sales and advertising, and technical sessions throughout the year. The volume also contains complete lists of PCGA leaders from 1893-1951, present officers and committeemen, and members.

Texas natural gas reaches New York City



Picture at left above shows Edward F. Barrett (center), president, Long Island Lighting Co., turning valve to start the flow of natural gas from Texas and Louisiana into his company's Glenwood gas plant. Vice-Presidents James W. Carpenter (left) and Errol W. Doebler (right) also participated. Picture at right shows Benjamin F. Feinberg, chairman, New York State Public Service Commission, "lighting the gas" on the banks of the Hudson River while Claude A. Williams (right), Transcontinental president, watches

NATURAL GAS began flowing into New York City on January 16 from the world's longest natural gas artery—the 1,840-mile 30-inch main line of Transcontinental Gas Pipe Line Corporation.

A valve at the end of the line was turned on by Claude A. Williams, president of Transcontinental during a ceremony held in biting cold weather on the banks of the Hudson River. Visual effect was added when the chairman of the State Public Service Commission lighted a gas torch. The event was heralded by news stories and large advertisements in the local press.

To start, the entire line will deliver approximately 250 million cubic feet of gas per day, about half of which will go to New York. Daily output gradually will be stepped up and is expected to attain its full capacity of 555 million cubic feet by April 1.

Completion of the pipeline opens a vast new energy resource at a time of national emergency. The line is capable of delivering

in a single day the equivalent in heat energy of over three million gallons of oil or 19,000 tons of coal.

At present authorized capacity, the line will serve, through gas distributing companies and municipalities, about five million gas meters. Involved are an estimated 15 million individual consumers principally in the metropolitan area, but including customers in Louisiana, Mississippi, Alabama, Georgia, the Carolinas, Virginia and Pennsylvania. When the line reaches its full capacity of 555 million cubic feet per day, 251 million cubic feet will be delivered in New York; 152 million cubic feet will be taken by various public utilities in New Jersey and Philadelphia. An additional 100 million has been reserved for delivery in New England via Northeastern Gas Transmission Company when that line is completed.

Five local utilities—Consolidated Edison Co. of New York, Inc., The Brooklyn Union Gas Co., Brooklyn Borough Gas Co., Long Island Lighting Co., and Kings County Light-

ing Co., will use the natural gas as raw material for mixing with manufactured gas. The blend of natural and manufactured gas will then be distributed to household and other utility customers in New York, Brooklyn, Westchester and Long Island. Staten Island has been served from another line since August 1949.

Construction will start this spring on a 26-mile extension to the Connecticut line, including another Hudson River crossing above New York. This extension will provide a connection with the New England distribution system of Northeastern.

The system taps 56 natural gas fields along the Texas-Louisiana Gulf Coast and initially will deliver to 43 municipalities and gas distributing companies in ten of the 12 states which it traverses. The line crosses 40 major rivers in its route across the Gulf Coast and up the Eastern Seaboard. Longest and most difficult of these was the 4,680-foot Hudson River crossing.

Most states represented at '50 convention

FORTY-TWO states, six foreign countries and Hawaii were represented at the 1950 American Gas Association Convention according to a recently completed analysis.

Total registered attendance at the Atlantic City sessions was 6,790. Among the largest delegations were New York State with 1,386

delegates, Pennsylvania with 1,384, and New Jersey with 1,035. California led the West Coast states with 100 representatives. Six states—Idaho, Mississippi, Montana, Nevada, New Mexico and South Dakota, were not represented.

The delegation from outside the United

States included five representatives from Japan, three from France, two from England, and one each from Hawaii, Denmark, Argentina and Australia.

The 1951 A. G. A. Convention has been scheduled for St. Louis, Mo., and will run from October 15 through October 17.

Emergency suggestions for gas customers

AMERICAN GAS ASSOCIATION has supplied its member companies with a brief set of recommendations for customers in event of air raid warning. The statement was prepared by the A. G. A. National Defense Committee, J. French Robinson, president, The East Ohio Gas Co., chairman.

Copies of the statement have been forwarded to the Federal Civil Defense Administration in Washington for consideration and eventual use by national and local civilian defense administrators. Pending issuance of a formal statement by the government, the

present material should assist gas companies in their local civilian defense planning.

Following is the text of the A. G. A. "Public Statement for Home Gas Users in an Air Raid Alert:"

When The Alert Is On:

- Do not turn off gas at the meter.
- Do not turn off pilot lights.
- Do turn off your gas range burners.
- Do turn off non-automatic gas appliances such as manually operated water heaters or room heaters.

If An Air Raid Occurs And The Premises Are Badly Damaged:

Turn off gas at the meter if it is safe and possible to do so. Once the main gas valve is turned off, for any reason, do not turn it on again yourself—call for a trained man.

Your gas company is working out further detailed instructions with your local civilian defense council. Watch for these instructions, then follow them.

New York building codes called deficient

MUNICIPAL building codes and ordinances in New York State generally fail to stand up under tests for adaptability to advances in construction methods, for adequate provision for safety, and for uniformity of standards.

This conclusion is drawn by New York State Building Code Commission from a comparative analysis of building laws of 245 municipalities. The commission found one to four of the following major deficiencies in most of the codes and ordinances:

Obsolescence of provisions, resulting from failure of municipalities to revise regulations to conform to technical progress.

Inadequacy, especially with respect to regu-

lations on plumbing, fire protection, and provisions requiring safe resistance to wind and snow loads.

Inflexibility, arising from rigid specification-type provisions, making difficult the use of materials not in strict conformity with such specifications.

Dissimilar requirements in codes, brought about by disregarding basic standards for structural strength and fire resistance established by authoritative agencies.

The commission also reported that some codes contain provisions specifically prohibiting the use of improved techniques for both new and traditional materials. Many impose

requirements higher than the minimum essential for safety.

The inquiry revealed that only 66, or approximately one-quarter of the codes and ordinances analyzed, have been revised since original adoption. There appeared to be less inclination toward revision on the part of municipalities with older codes than those with regulations enacted since 1930.

The commission reported that at least 334 municipalities have codes or regulations in force. More than one-fourth of the laws are out of print, or are unavailable in printed form.

A. G. A. commends excess profits tax group

AERICAN GAS ASSOCIATION has honored the men responsible for helping to obtain a new excess profits bill more adaptable than the previous one to the needs of the utility industry.

Members of the Joint Taxation Accounting Committee of American Gas Association and Edison Electric Institute were commended last month for their long and arduous work on this involved subject. A unanimous resolution by the A. G. A. National Defense Committee on January 9 singled out the joint taxation group for its preparation of background material in a study and report on the impact of excess profits taxation on the gas and electric utility industries.

This report was the subject of conferences with staff members of the U. S. Treasury Department and Congressional committees. Later efforts of gas and electric utility industry witnesses before Congressional committees on excess profits were based largely on findings outlined in this report.

The Defense Committee resolution noted that "H. W. Ziethen [The Peoples Gas Light and Coke Co., Chicago], chairman of the A. G. A. Taxation Accounting Committee and his associates were particularly helpful to the Association's witness, Mr. D. A. Hulcy and members of the A. G. A. Defense Committee in clarifying complicated issues."

"The report and testimony," the resolution continues, "were instrumental in establishing among governmental bodies a clear picture of the effect of such type of taxation on the gas and electric industries."

"The utility industries by virtue of such report and testimony were successful in obtaining a more realistic approach to such taxation than had been experienced in the past."

Sincere appreciation of both the Defense Committee and the gas industry were expressed to Mr. Ziethen, his co-chairman, C. J. Trudeau, Wisconsin Electric Power Company, and members of their committee.

Mr. Ziethen and Mr. Trudeau also served as co-chairmen of the working group on this subject, the Joint Subcommittee on Excess Profits Taxation. Other members of that group who helped to draft the utility industry report include: W. S. Alt, Union Electric Co. of Missouri; J. W. Balet, Consolidated Edison Co. of New York, Inc.; R. M. Campbell, Consolidated Natural Gas Co.; R. M. Dodds, Ebasco Services Inc.; C. H. Mann, Columbia Engineering Corp.; B. P. Smith, Texas Eastern Transmission Corp.; J. R. Weger, Consolidated Gas Electric Light and Power Co. of Baltimore, and Charles Wigand, Commonwealth Services Inc. These men were assisted by the following guests: J. K. Polk, Whitman, Ransom, Coulson & Goetz; E. Roy Gilpin, Middle South Utilities Co.; T. E. Hurns, The Detroit Edison Co.; J. A. Rinehart, Ebasco Services Inc., and L. F. Scholley, Cleveland Electric Illuminating Company.

Gas exhibit largest at Washington show

THOUSANDS of delegates and visitors examined Washington Gas Light Company's Combined Commercial Cooking Exhibit during the 1950 convention and exposition of Washington Restaurant Association. The show was held in Washington, D. C., December 12-15.

Largest of nearly 70 exhibits in the exposition, the gas display featured heavy-duty gas cooking and baking equipment, counter appliances and water heaters. Commercial gas

men from Washington Gas Light Co., representatives of National Restaurant Association and equipment manufacturers, staffed the gas area to consult with exhibitors, restaurateurs and visitors.

Demonstrations and discussion meetings on food research, food costs, management and food service problems were held at various times during the week.

Equipment shown in the gas exhibit was supplied by: Anetsberger Bros., Inc.; The G. S.

Blodgett Co.; Cleveland Range Co.; Detroit-Michigan Stove Co.; Lawson Water Heater Manufacturing Co.; Lyons-Alpha Products Co., Inc.; MagiKitch'n Equipment Co.; Martin Oven Co.; J. C. Pitman & Sons, Inc.; Savory Equipment, Inc., and A. O. Smith Corporation. In addition, Vulcan-Hart Manufacturing Company showed a line of stainless steel ranges in the display of a Washington dealer, Cooper Equipment Company.

A.G.A. announces January 1951 publications

LISTED below as a special service for readers are American Gas Association publications published in 1951 up to the time the MONTHLY went to press. Information shown in parentheses indicates the audience for which each publication is designed.

General

● Natural Gas Companies Having Industrial "Interruptible" Rates in Effect—taken from A. G. A. Rate Service; (rate men). Available without charge from Kurwin R. Boyes, A. G. A. Headquarters.

Laboratories

● Directory of Approved Gas Appliances and Listed Accessories January 1951—semi-annual; (utilities, manufacturers, dealers, installers, code authorities, etc.). Available from A. G. A. Laboratories, 1032 East 62 St., Cleveland, Ohio; 75 cents a copy.

● American Standard Approval Requirements for Gas Water Heaters Effective January 1, 1951; (utilities, manufacturers). Available from A. G. A. Laboratories, 1032 East 62 St., Cleveland; \$2.00 a copy.

New Freedom Gas Kitchens

● Modern Designs for Kitchens and Laundries; (general consumers, home service, schools and colleges, kitchen planners). Available from A. G. A. Headquarters; seven cents a copy.

● Kitchen Planning Guide; (same audiences as above). Available from A. G. A. Headquarters; ten cents a copy.

● Sparkling New Freedom Gas Kitchens; (same as above). Available from A. G. A. Headquarters; 25 cents. (See next page.)

- **Ten Key Pieces to Modern Kitchen Planning;** (same as above). Available from A. G. A. Headquarters; five cents a copy.
- **Kitchen and Laundry Pages;** (same as above). Available from A. G. A. Headquarters; 1½ cents a copy.

Promotion

- **Natural Gas Booklet, Water Heater Booklet, Range Booklet, Laundry Booklet;** (companies changing to natural gas). Available from A. G. A. Promotion Bureau; 4½ cents a copy—1½ cent discount to PAR Plan subscribers.
- **Food is Fun.** Available from A. G. A. Promotion Bureau; ten cents a copy.
- **History of Gas.** Available from A. G. A. Promotion Bureau; two cents a copy.
- **Hot Water Magic—laundry manual.** Available from A. G. A. Promotion Bureau; ten cents a copy.
- **How-to-do-it Books—**issued in campaigns. Available from A. G. A. Promotion Bureau; 25 cents a copy.
- **Sales Makers—**Ranges, water heaters, air conditioning, house heating, incineration, refrigeration, laundry dryer. Available from A. G. A. Promotion Bureau; 15 cents a single copy, ten cents in quantities of ten and over.
- **Automatic Gas Cookery;** (home economics teachers). Available from A. G. A. Promotion Bureau without charge.

Research

- **Research Bulletin No. 60; Summary Bulletin; Interchangeability of Various Fuel Gases with Manufactured Gas;** by A. G. A. Gas Production Research Committee; (manufactured gas companies). Available from A. G. A. Laboratories, 1032 East 62 St., Cleveland, Ohio; \$4.00 a copy.
- **Operation of Kerpely Producer with Oxygen-Enriched Blast at Bureau of Mines, Louisiana, Mo.,** by H. R. Batchelder, R. G. Dressler, R. F. Tenney, R. E. Kruger, R. D. Segur; (manufactured gas companies and natural gas distributors—possible future source of gas for synthesis into natural gas). Limited number available from A. G. A. Headquarters; 25 cents a copy.
- **Investigation of the Effect of Gas Flame Impingement on Combustion Characteristics of Domestic Range Top and Water Heater Burners;** by A. G. A. Committee on Domestic Gas Research; (gas company and manufacturer company delegates and special mailing list). Available from A. G. A. Headquarters; 75 cents a copy.
- **A Study of Large Single Port Atmospheric Gas Burners—Flashback Characteristics on Ignition;** by A. G. A. Committee on Domestic Gas Research; (Gas company and manufacturer company delegates and special mailing lists). Available from A. G. A. Headquarters; 50 cents a copy.

Residential

- **Guide for Installers of Gas Central Heating Systems, Conversion Burners, Floor Furnaces, Vented Space Heaters and Unit Heaters;** by A. G. A. Gas House Heating Committee; (for the gas heating trade). Available from A. G. A. Headquarters, 50 cents a copy.

Round Up wins audience in Oregon



Pacific International Livestock Exposition is a big event and a natural tie-in for Portland (Ore.) Gas & Coke Company's Old Stove Round Up. Over 12,000 people sampled cookies, saw modern gas appliances

Fifteenth domestic advertising anniversary



Get-together at reception marking fifteenth year in which McCann-Erickson agency has served as advertising counsel for the residential phase of the Association's national gas advertising program: (Left to right) Harrison K. McCann, board chairman, Charles W. Person, director of advertising, A. G. A.; H. Carl Wolf, managing director, A. G. A.; Marion Harper, Jr. president, McCann-Erickson



A. G. A. Domestic Gas Copy Committee meeting January 22: (Clockwise around table) Clayton Cassidy, chairman; C. Fred Westin, Raymond Little, D. R. Schively, Noel Mallaby, Howard A. Praeger, W. F. Muhlbach, Margot Sherman, Gussie Jones, Christy Payne, Jr.; (right rear) Tom Gibbons, C. W. Person, J. I. Gorton, R. M. Alderman, H. V. Potter. (not in picture) W.B. Hewson, Harold Massey, Cy Edwards

ASA services available to A.G.A. members

AMERICAN GAS ASSOCIATION, on behalf of its member companies, has assumed the share of operating costs of American Standards Association allocated to the gas industry. The move resulted from a study of services which ASA renders to the gas industry, including those which make possible the A. G. A.

Laboratory Approval Plan for gas appliances as an American Standard.

Five major ASA services are now available to A. G. A. member companies under the new arrangement: the monthly publication *Standardization*; the ASA reference library of 50,000 standards, specifications and related publi-

cations; the ASA information and reference services; announcement of all American Standards as they are approved and a free copy of each on request, and representation on ASA's company member conference.

Companies that are already members of ASA are urged to continue that support.

New bibliography on natural gas storage

STORAGE of natural gas is the subject of a new bibliography prepared by the Association's Library. Included are titles, authors and sources of 43 articles on various methods and problems connected with storing natural gas.

Objective of the bibliography is to assist gas men in their planning for most efficient fuel usage of natural gas. The articles mentioned appeared in A. G. A. MONTHLY, A. G. A. PROCEEDINGS, gas industry trade

journals, and miscellaneous publications.

Copies of "Bibliography on Natural Gas Storage" can be obtained without charge from, Librarian, American Gas Association, 420 Lexington Ave., New York 17, N. Y.

New Brooklyn house heating authorized

THE Brooklyn Union Gas Company announced on January 22 that authorization for sale and installation of 3,500 additional house heating units had been received from the Public Service Commission.

Applications for the new installations are now being accepted by the company and its associated plumber dealers. Limitations as to the size of the new installations have been removed. E. L. Vervoort is supervisor of house heating for the company. Mr. Vervoort is also current chairman of the Gas House Heating

Committee, American Gas Association.

The present partial lifting of restrictions marks one of the first results of the coming of natural gas to the area served by The Brooklyn Union Gas Company. Initial delivery to the company from Transcontinental Gas Pipe Line Corp., builder of the 1,840 mile Texas-to-New York natural gas transmission line, is estimated at 23 million cubic feet per day. It is expected that the daily delivery figure will be increased within a month to the full con-

tract quantity of 70 million cubic feet per day.

With this change in the house heating restriction, residents of the company's franchise area may now purchase gas house heating equipment from manufacturers, dealers, heating contractors, or from any other source. As each sale is made, an application will be filed by the seller against Brooklyn Union's open list of authorization numbers. This procedure will continue until the list has been exhausted.

1951 better copy contest under way

GAS INDUSTRY advertising staffs are invited to submit samples of advertising and publicity to the 1951 Better Copy Contest sponsored by Public Utilities Advertising Association. The contest is open to all public utility companies in the gas, electric and transportation industries. It is the oldest competi-

tion run continuously by the advertising profession.

Twenty-two different classifications of advertising and publicity work will be featured and judged. Winners will be recognized at the PUAAs annual convention in New York, May 17 and 18, when a total of 174 awards will be

granted. There is no entry fee.

Rule books are available from C. Fred Westin, Public Service Electric and Gas Co., 80 Park Place, Newark, N. J. Current president of PUAAs is William B. Hewson, assistant vice-president, The Brooklyn Union Gas Company.

Detroit-Michigan wins range awards



John A. Fry (left), president, Detroit-Michigan Stove Co., receiving from Emil Hartman, director of the Fashion Academy of New York, the first gold medal award ever bestowed by the Academy upon a kitchen range. Observing is Fred Kaiser, Detroit-Michigan vice-president. The following month the company received the 1951 merit award of the American Society of Industrial Engineers

Safety poster series

A NEW SERIES of safety posters directed to the gas industry is being developed with the cooperation of National Safety Council. Copies will be available from A. G. A. headquarters at the regular members rates of National Safety Council, regardless of membership affiliation.

Now available is the first "trial" poster in the series, No. 9142-A, entitled "Look Out Before Stepping Out." Suggestions regarding gas industry hazards that can be used for future posters are being solicited by National Safety Council. Comments should be sent to E. C. Baumann, chairman, A. G. A. Subcommittee on Posters, American Gas Association, 420 Lexington Ave., New York 17, N. Y.

Rate report resume

TRYING to locate pronouncements on important rate matters? If so, you may be interested in a newly published resume of all rate reports made by committees of American Gas Association and the former National Commercial Gas Association, 1916-1950.

Members of A. G. A. can obtain copies of the resume by writing to Librarian, American Gas Association, 420 Lexington Ave., New York 17, N. Y.

Executive changes made in Connecticut

TWO EXECUTIVE promotions in The Connecticut Light & Power Company were made on January 1. Paul V. Hayden, executive assistant in the public relations department, was named director of public relations. Stuart P. Gillespie, research engineer, was made head of the company's research department. The appointments fill vacancies created by the recent retirement of Charles J. Allen, public relations vice-president, and E. J. Amberg, research vice-president.

Mr. Allen is current chairman of the Publicity and Advertising Committee, American Gas Association, and a past-president of the Public Utilities Advertising Association. He is also a former director of the Advertising Federation of America.

He joined the Connecticut utility as office manager, later advancing to auditor, executive assistant, assistant secretary and assistant treasurer. In 1929 he was made manager of the company's Western Division with headquarters in Waterbury. He remained in that post until 1939 when he was appointed

to the newly-created position of director of public relations. Mr. Allen was made vice-president in 1946.

Mr. Amberg came to the United States from Switzerland. He joined The Connecticut Light and Power Company in 1917 as an engineer and was later promoted to head the research department. He was elected a vice-president in 1946.

Mr. Hayden, a Brown University alumnus, joined The Connecticut Light & Power Company in 1929 as an industrial power engineer in Danielson. In 1940 he was transferred to the Willimantic offices, and in 1947 became engineer for special assignments in Waterbury. He was named industrial manager in 1948 and executive assistant in the public relations department in 1950.



C. J. Allen



P. V. Hayden



S. P. Gillespie

A charter member of the Connecticut State Development Commission, Mr. Hayden is currently chairman of the commission's industrial advisory group.

Mr. Gillespie has served with the company since 1945, shortly after his release from the Navy. He became assistant research engineer in the utility's research department in 1946 and was named research engineer in 1948. Mr. Gillespie attended Stevens Institute of Technology and prior to military service was employed by Jersey Central Power and Light Company.

Personal and otherwise

Two accountants advanced by Peoples Gas

TWO PROMOTIONS have been announced in the accounts division of The Peoples Gas Light and Coke Co., Chicago. Both men are active in American Gas Association.

Arthur Skelton has been assigned to assist the assistant vice-president and comptroller with the title of general superintendent. A 25-year employee, Mr. Skelton was formerly superintendent of the general accounting department. He has been extremely active on several general accounting committees of

the A. G. A. Accounting Section.

William D. Sweetman has been appointed superintendent of the general accounting department to succeed Mr. Skelton. Also a 25-year employee, he was previously assistant superintendent of the department. He recently was assigned to the company's management training program. Mr. Sweetman has been a steady contributor to the A. G. A. Accounting Section. Currently he is chairman of the Associations Accounting Employee Relations Committee.

LPGA honors Kerr for distinguished service

A. N. KERR, one of the "fathers" of the liquefied petroleum gas industry, has been presented with a distinguished service life membership in Liquefied Petroleum Gas Association. Mr. Kerr, president of Imperial Gas Co., Los Angeles, is the second recipient of the award. Mark Anton, president, Suburban Propane Gas Corp., Whippany, N. J., was honored in May 1950.

LPGA's newly created distinguished service

life membership is given to individuals who have made an outstanding contribution to the advancement of the LP-gas industry or of the association.

Experiments conducted by Mr. Kerr in 1910-11 at Sistersville, W. Va., had an important bearing on the birth of the LP-gas industry. Looking for a way to tame the "wild gases" that were then a major headache and

waste product at the nation's oil fields and refineries, he devised a crude compressor which recovered enough liquefied gas to heat a chicken coop.

The industry, of which he was one of the co-founders, today brings the comfort and convenience of modern gas service to 7,500,000 homes in rural, small town and suburban areas.

Allen retires from Canadian Gas Association

GEORGE W. ALLEN retired on January 1, 1951 after almost 35 years of service as secretary-treasurer of Canadian Gas Association, and director of its Laboratories Approval Extension Division. Warner A. Higgins, Toronto public relations consultant, succeeds Mr. Allen as executive secretary and treasurer of Canadian Gas Association.

Mr. Allen's long and varied career in the gas industry began a half-century ago when he owned an electrical and gas contracting business. In 1909 he joined the sales staff of The Consumers' Gas Co. of Toronto, later advancing to advertising manager.

He was appointed secretary-treasurer of the Canadian Gas Association in March, 1916 after the retirement of John Keillor. He later

added the editorship and advertising management of the *Canadian Gas Journal*, a position which he still holds.

In those years, Mr. Allen was active on many committees of the former National Commercial Gas Association, was the recipient of the Association's highest award for inaugurating and carrying on successful sales classes. NCGA later joined with American Gas Institute to form American Gas Association.

One of the four men who signed the affiliation agreement between American Gas Association and Canadian Gas Association, Mr. Allen was also one of the parties to the affiliation agreement drawn up by the A.G.A. Testing Laboratories.

In addition to his active participation in gas

industry activities, Mr. Allen has contributed many articles to trade publications. He has also served the Toronto Board of Education as director of evening classes in scientific advertising and salesmanship, and is a well-known lecturer on that subject.

Mr. Allen may be reached at his former address, 7 Astley Avenue, Toronto 5, Ontario. Temporary mailing address of Canadian Gas Association is Post Office Box 158, Terminal "A," Toronto, Canada.



G. W. Allen

Melton new president of Ohio Gas Company

C. B. MELTON has been advanced from vice-president and general manager to president and director, Ohio Gas Co., Bryan, Ohio. He succeeds Frederick E. Zeuch who has held the

post since February 1946.

Before joining Ohio Gas Company in January 1947, Mr. Melton served as president of a group of eastern gas properties with head-

quarters at Hagerstown, Maryland. He has had a wide experience in the public utilities field.

C. L. Fleming, treasurer of the company, has also been made assistant secretary.

Lamar transfers to Maryland gas post

C. C. LAMAR, manager, Elizabeth & Suburban Gas Co., Elizabeth City, N. C., has been transferred to manager, The Elkton Gas Co., Elkton, Maryland.

Mr. Lamar has been associated with the gas industry for more than 30 years. He joined the Pennsylvania & Southern group as manager of

the Elizabeth & Suburban Gas Company five years ago.

At the same time, P. C. Williams has resigned as manager of The Elkton Gas Co., a post he has held since 1929. He will be retained temporarily on a consulting basis relative to local operations.

F. Leroy Olvey has been appointed manager of Elizabeth & Suburban Gas Company. Mr. Olvey had been employed by Lawrenceburg Gas Co., Lawrenceburg, Ind., the Peninsular Gas Co., Calumet, Mich., and Indiana Gas & Water Co., Indianapolis, Indiana.

Five promotions made by Consumers Power

FIVE PROMOTIONS have been announced by Consumers Power Co., Jackson, Michigan. John P. Bromley, George S. Cushman and Lyman W. Robinson have been named assistant comptrollers of Consumers Power. Cecil I. Jones has been made assistant comptroller of Michigan Gas Storage Co., a subsidiary organization. George E. Olmsted has been appointed assistant secretary for both companies.

All five men have had long careers in the gas industry. Mr. Bromley, a University of

Michigan alumnus, joined Consumers Power in 1926. He was made general payroll accounting supervisor in 1938, and since 1950 has been accounting methods analyst. In his new post, he will serve as general accounting supervisor.

Mr. Cushman, who joined the company in 1918, has been general customers accounting supervisor since 1925. He will serve as division accounting supervisor. Mr. Robinson has been with Consumers Power and affiliated companies since 1923. An Iowa State gradu-

ate, he will be plant accounting supervisor.

Mr. Jones is a graduate of Ohio State University and has served Consumers Power and affiliated companies since 1924. Mr. Olmsted was formerly secretary and treasurer, Michigan Public Service Co., recently purchased by Consumers Power. Since then, he has served as special assistant to Division Manager B. D. Hilty. He is a graduate of University of Chicago and University of Kansas City Law School.

Bourke hotel speaker

AIR FORCE Captain John J. Bourke, former director of Commercial Cooking Promotion for American Gas Association, was a featured speaker last month at the mid-year graduation of the Lewis Hotel Training School in Washington, D. C.

Stacey elects president

EDWARD J. BAECHLE has been elected president of The Stacey Manufacturing Co., Cincinnati, Ohio. He succeeds the late Alvin A. Ranshaw.

Mr. Baechle has been associated with the company for over 35 years. During that period he has held various posts including the office of plant manager, secretary and treasurer and executive vice-president. He has served as a director of the company since 1923.



E. J. Baechle

J. Thorpe Ranshaw was elected to fill the office of executive vice-president.

The Stacey Manufacturing Company is celebrating its 100th anniversary this year.

Advertising man honored

MARION HARPER, JR., 34 years old, president of McCann-Erickson Inc., is the recipient of the Young Men's Board of Trade 1950 Distinguished Service Award as the outstanding young man in New York City. This is the first time an advertising man has received this recognition.

Goldsmith retires from Brooklyn Union

C. S. GOLDSMITH, active in technical affairs of the gas industry for many years, retired recently from The Brooklyn Union Gas Company. He had been engineer of distribution for the Brooklyn utility since 1941.

Mr. Goldsmith served as chairman of the Association's Technical Section (now the Operating Section) in 1946 and 1947. He recently became a member of the A. G. A. Ad-

visory Council. He was active on various A. G. A. committees and was the author of a number of technical articles. More than 200 friends and associates attended his retirement dinner.



C. S. Goldsmith

Caloric names officers and directors

ELECTION of new officers and directors has been announced by the board of Caloric Stove Corp., Philadelphia.

Nathan R. Klein, former president, was named chairman of the board. Julius Klein, former vice-president and sales director, was appointed president. Meyer Klein was made vice-president.

Other officers are: J. W. Roberts, vice-president in charge of manufacturing; Harry W. Klein, treasurer, and B. Spencer Baker,

secretary.

Julius Klein will continue to supervise company sales in addition to his new responsibilities. He is active in various committees of American Gas Association and Gas Appliance Manufacturers Association.



Julius Klein

Manufacturers announce personnel changes

● **Roberts-Fulton Controls Company**—H. W. Geyer has been appointed director of the West Coast Research and Development Laboratory.

Mr. Geyer is active on numerous committees in American Gas Association and Pacific Coast Gas Association. He is well known for his service with Southern Counties Gas Co. of California in charge of utilization, laboratory tests, customer service and training of utility service men. He was previously industrial fuel engineer with The Philadelphia Gas Works Company.

Mr. Geyer is the author of numerous technical reports and papers. He has been a consultant to appliance and accessory manufacturers on design and operation.

He succeeds S. G. Eskin who has transferred to the company's Greensburg, Pa. office as technical advisor.



H. W. Geyer

Economic understanding

(Continued from page 19)

there is disbelief. We see, for example, refusal to accept as fact the thought that any one operation of this company might be financially unsound. We have always been talking from consolidated balance sheets. Therefore, we must make progress in getting a better understanding of the local situation.

Essentially we favor a "low pressure" approach. Several recommendations for improvement in what we have been doing have come to light as a result.

First of all, the problem revolves around our internal communications. There is a definite need for a company-wide coordination of our communication efforts.

With respect to our house organs, a check has shown that we are using less than ten percent of the space to inform our people on subjects having economic significance. That we need a policy covering the release of debatable information is evident. We also need to render service from the headquarters to give the house organs some of the type of materials most difficult for them to assemble locally.

Certain improvements can be made in the field of company literature. At the moment we are perhaps relying too much on material which has been directed at the public, rather than the employee audience. Also, we need to develop an effective (but voluntary) channel of distribution.

In our employee courses, it is recommended that the orientation program be extended to more people. This is a highly organized approach for familiarizing people with the history, the structure, and the operations of the organization. It conveys some economic concepts.

In the field of supervisor training there is an evident need for help to be rendered by a new course dealing with the techniques of communications. This is a natural evolution from previous courses in job instruction and job relations techniques. The supervisor needs the help which will come from case-study type discussion on how to deal with communications problems. This course will also give him help in perfecting the upward flow of communications from the employee to top management.

The foreman conference programs in the refinery have proved an essential mechanism for communications. Devel-

opment of the counterpart of this type of conference is needed in the home office. It may also be needed to some extent in sales operations. Through this discussion medium we must intensify our efforts to improve the supervisors' economic understanding.

Can we rely on using the supervisor to relay much of this information? There is much he can do to influence attitudes and to create an understanding of day-to-day operations. However, when a substantial body of information must be conveyed, it is shortsighted to expect the supervisor to do it.

At times, it must be confessed, the supervisor's thinking is not much different from that of the rank and file. He needs special consideration to improve his own economic understanding. However, the setting in which supervision must function is truly a human one; economic issues should be settled elsewhere.

We can't rely entirely on the printed word. There is now, and there will be again in the future, a sufficient volume of information to be conveyed that will require going directly to the employee group. Thirty years ago this company took the lead in creating the concept of foreman conferences. We now are at the point where we should create a new concept; that is, the idea of employee forums.

There is strong evidence that many of these programs resulted from heavy internal pressure to "do something."

Employee forum plan

The concept of the employee forum, while yet to be fully developed goes something like this. There should be meetings of small groups, approximately 35 persons. There should be well-conducted presentations. There should be ample opportunity for questions to satisfy the employee and to reveal how the employees are thinking. The small meeting atmosphere, plus the use of the best of training aids, would encourage real acceptance of the message.

This is a relatively new, and certainly bold approach. Our past experiences with employee meetings have mainly been the inspirational type of large gathering. We do see other companies which have been evolving certain types of well-run, fairly democratic meetings of their employees. Apparently, it is not a technique that only a small company can afford. Du Pont is now undertaking an effort for a one-day meeting on eco-

nomics extending to their 70,000 employees.

There is a strong feeling by those who have studied this problem closely that the employee forum can and should become one of our most important devices for internal communication. How many forums we hold is not the important issue. They can be few and far between. *The main point is creating this mechanism for communication.*

There are certain specific beliefs which need to be developed, fortified, or confirmed among our people (including supervisors). They can prove the base upon which understanding of the economics of our business can be built in the future. To develop these beliefs, some of the themes for the first employee forum should be as follows:

- (1) A fuller concept of the values in our benefit programs.
- (2) Conviction regarding the fairness of our whole wage program.
- (3) The concept that "balance" must be maintained in order to have a healthy business.
- (4) The importance to the individual of the efficient operation of his unit in the company.
- (5) The significance to the individual of the prices we get for our products and the use we make of profits.
- (6) The many influences which have a bearing on the company and thereby the individual's opportunity, security, and growth within the company.

Treating some of these themes will require well-conceived and simple, readily understood presentations. Some may question whether this is teaching economics. *Despite its label, it is felt that this approach will produce economic understanding.*

Admittedly, it is not the easiest way to tackle the problem. Yet it is based on a sound appeal. It is firmly rooted in an understanding of how our people think and react plus conviction that this company's story is one which can be told with confidence in the results.

The individual looks toward finding job satisfactions concerning such items as security, proper pay, opportunity, and confidence in the organization. We are not out to try to sell him anything. We are simply trying to keep him informed by explaining to him the things in which he has the greatest interest. *If done well, this type of explanation can become a most important factor in our efforts to develop and maintain favorable attitudes.*



William P. Wallace

assistant engineer of distribution for The Brooklyn Union Gas Co., died on January 9 following an operation the previous week. He was a member of American Gas Association.

Mr. Wallace joined the company in 1930 as a cadet engineer, later serving in all divisions of the distribution department as a superintendents' assistant. He became engineer's assistant in 1941 and assistant engineer of distribution in 1945.

Edwin E. Hedene

chief engineer of Nordstrom Valve Division, Rockwell Manufacturing Co., died in Pitts-

burgh on December 28 after a short illness.

Mr. Hedene studied mechanical engineering at the University of California and had been chief engineer of the Nordstrom Valve plant in Oakland, Calif., before moving to Pittsburgh. He served the company for 23 years. For the past several years, he helped coordinate engineering in Nordstrom's Pittsburgh, Hope- well, Oakland and East Chicago plants.

E. Bernard Freeman

industrial engineer, Central Indiana Gas Co., Muncie, died December 9 after a short illness.

A University of Michigan alumnus, Mr. Freeman began his life-long career with the gas industry immediately after graduation. He was affiliated with Michigan Consolidated Gas Co., Detroit, for 20 years and with a gas company in Panama for two years. He joined Central Indiana Gas Company in 1946.

Mr. Freeman was a member of American Gas Association.

Surviving are his wife, Katherine; his mother, Mrs. William E. Freeman.

George F. Meyer

died on Thursday, January 11, 1951. Mr. Meyer was president of F. Meyer & Bro. Co., and former president, The Meyer Furnace Co., Peoria, Illinois.

Eugene L. White

eastern utilities executive, died at his home in Ocean City, N. J., on January 11.

Mr. White was president and director of Allied Power and Light Co., Pittsford, Vt., and of Genesee Valley Gas Co., Pavilion Natural Gas Co., Valley Gas Corp., and Churchville Oil and Natural Gas Co., all of Genesee, N. Y. He was a director of Atlantic City Electric Co., formerly vice-president and general manager of New Jersey Power and Light Company at Dover, and a vice-president and general manager of South Jersey Power and Light.

Survivors include his wife, Mrs. Helen Nicholson White; a brother, J. Edward White; a sister, Mrs. Florence Brown, and a son, William White.

Accidents cripple manpower

(Continued from page 6)

all safety reports and recommendations of other committees. It can authorize safety campaigns and educational programs, subject to approval of the general manager. It can also act on and suggest to the general manager improvements that might be considered major. Minor purchases and improvements can be made by division or department heads.

A supervisory committee consists of various foremen and supervisors and has the function of passing safety requirements to all employees. This group annually elects a chairman and secretary and an inspection chairman from its ranks. Monthly meetings are held.

Minor accidents are investigated by the safety engineer. Lost-time accidents are investigated by any four members of the safety board and the safety engineer.

Chairman of the inspection committee is given three employees for his group. They make a periodic inspection of all company properties, reporting findings to the safety engineer. He reports to the general manager. The committee looks for unsafe practices as well as unsafe conditions and housekeeping.

Monthly safety meetings are held at the plants (both gas and water). Officers are elected by the employees and they handle their own meetings calling in the safety engineer for a talk or picture on safety. Through these meetings and supervisory meetings we try to reach all employees and let them have a say on safety.

In addition, we have a safe driver award committee which passes on all vehicle accidents. Driving rules are patterned after National Safety Council rules. We award National Safety Council safe driver pins and cash awards at an annual banquet. Our safe driver award committee has two permanent members—the superintendent of the garage and the safety engineer, who is chairman. Annually two supervisors and three drivers are elected to the committee, for a group of seven.

We have had a safety training course for supervisors and expect to have another in the future. We also have given

many regular and some advanced first aid courses, plus demonstration of fire fighting at every plant and the main office.

Company J

In order to reduce the number and severity of accidents this company has taken the following steps:

(1) Organized a joint labor-management safety committee. This group meets regularly once a month to consider suggestions for alteration of equipment, etc., and to consider safe practices.

(2) One year ago, we decided to place Workmen's Compensation obligations with an insurance carrier. This was done with the special objective of obtaining skilled advice of the insurance company safety engineers' survey and their periodic inspection.

(3) The company has given its supervisors and foremen instructions to carefully investigate causes of all accidents.

(4) Employees have been provided with safety goggles, at company expense, where there is risk of injury to eyes.

(5) The company's compensation insurance program is designed to reduce time lost from injury as well as reduce the number of injuries. The number of instances reported has increased considerably due to rigid insistence upon doctor's examination and x-rays for apparently trivial bone and joint injuries. However, the time lost has been greatly reduced.

Company K

Our record for 1950 is terrible. We have just completed a survey of all accidents, whether a loss of time was involved or not. The figures and causes for our company's increase in both frequency and severity came as a rude awakening.

We had 164 injuries, 7.8 percent of which were to the foot. Since we are operating with an increased employee staff, we also found that 21 percent of all injuries were by new and probationary employees.

At every safety meeting we stress the necessity of older employees acting as safety men, guiding and training new employees. We also are trying to convince all outside employees that they should wear safety shoes.

Your Accident Prevention Committee can help us with posters designed to make new employees safety-minded and convince all employees that safety shoes are a must.

Company L

It has been found in our gas operations department that a good housekeeping program is one of the most important factors in promoting safe work practices. Good housekeeping is not merely the sweeping of floors and washing windows. It also involves the inspection of plants, street trucks, tools, equipment and proper maintenance of all property. This phase of our program removes many accident hazards, provides better working conditions, and is an employee morale builder. Employees seem to associate good housekeeping with safe work practices. Greater interest in all aspects of the safety and training program has resulted.

Departments which have maintained the best housekeeping programs in the gas, and also in the electric operations of our company, have had excellent safety records.

American Gas Association could render a great service by providing a code of safe work practices for all phases of the industry. Educational pictures dealing with use of equipment, tools and safe practices of the gas industry would be very beneficial.

Company M

Employees of our gas department have worked from October 19, 1949 to date (January 10, 1951) without sustaining a lost-time injury. That is a total of approximately 550,000 manhours.

We have the *active* interest and support of top management in our safety program. In addition, we have made safety part and parcel of our job training programs and our job procedures.

Division superintendents are held responsible for the safety of their divisions. Supervisory personnel take an active interest in the safety program. We believe that we have sold safety to all our employees by the following steps:

- (1) A rotating safety committee on which each employee serves three months, and all employees serve at least once each three years. The committee meets monthly.
- (2) Inspections are made each month by a subcommittee of three, picked from the safety committee.
- (3) Devotion of at least one-half hour of monthly op-

erational meetings to safety.

(4) Operation of a suggestion system with cash awards for all suggestions accepted, including those on safety.

(5) At least one major article on safety featured in departmental employee publication each month.

(6) Direct mail to employees' homes. Literature on safety mailed direct to employees' homes once each month.

Here are some suggestions for A. G. A. and the Accident Prevention Committee:

(1) Continue to encourage the *active* participation of top management in company safety programs. Without support from the top the road is pretty tough.

(2) Create awards for the smaller gas companies, for periods of 250,000 and 500,000 manhours worked without a lost-time injury.

(3) Publish details of unusual accidents in the gas industry—somewhat similar to what is being done by AT & T Company.

(4) Promote regional meetings by the Accident Prevention Committee to which safety supervisors and one or more members of operational personnel would be invited. Have discussions on specific subjects not generalities (operational hazards).

(5) Keep on with development of safety posters relative to gas industry hazards, especially those connected with strictly gas operation hazards, not merely housekeeping—falls, ladders, etc.

(6) Suggest the formation of safety committees composed of management and employees in each company, to meet monthly to analyze all accidents and suggest remedies.

Another point is that letters from top officials of A. G. A. sent to gas company management from time to time help stimulate thinking along safety lines.

Obviously, top management should demand a good safety experience. This point was mentioned by several executives and cannot be emphasized too strongly. Management carries the final responsibility for the success or failure of an accident prevention program. It cannot afford to pinch pennies on safety or it will lose dollars on accidents.

Safety is a long-term job. It requires careful, thorough planning. Safety has been achieved in many companies—certainly it can be in others.

Safety means survival!

Material and chemical needs to be studied

THE GAS INDUSTRY is well represented on a new Committee on Materials and Chemicals Requirements established by the National Petroleum Council. Major aim of the committee is to determine needs of the oil and gas industries for such items as cop-

per, aluminum, zinc, nickel, sulfur, etc.

D. A. Hulcy, president of American Gas Association and president, Lone Star Gas Co., Dallas, Texas, is chairman of the Subcommittee on Natural Gas Production. W. G. Maguire, chairman of the board, Panhandle

Eastern Pipe Line Co., New York, is chairman of the Subcommittee on Natural Gas Pipe Lines Transportation. A third prominent gas executive, Stuart M. Crocker, president, The Columbia Gas System, Inc., heads Subcommittee on Natural Gas Distribution and Marketing.

Largest gas catalytic cracking plant in action

THE LARGEST catalytic cracking plant ever constructed for fuel gas production was put into operation at Glenwood Landing Station of Long Island Lighting Company last month. This plant will convert 25 million cubic feet of natural gas from Transcontinental Gas Pipeline Corporation to 46½ million cubic feet of

manufactured gas replacement each day.

This new catalytic cracking plant is intended to take advantage of the advent of natural gas to the New York area to provide improved service for Long Island Lighting customers. The new installation will supply a substantial portion of the gas distributed by Long Island

Lighting Company. This is the second catalytic cracking plant to be installed by the company, the first having been put in operation in January 1948 to meet peak load demands. The two plants were designed and constructed by Surface Combustion Corp., Toledo, Ohio.

Taxes and Liberty

(Continued from page 22)

lems of industry, agriculture, transportation and finance. Some things that seem clear to me are these: If I consistently spend more than I make, I'll go broke. Once broke, if I handle the matter with sufficient finesse, the government will see to it that I do not starve; if millions of other Americans get in the same situation, the government will go broke. Without exception, history shows us that when the government of a capitalistic democracy goes broke, dictatorship follows. I do not like dictatorship in any form. Therefore, I will work hard, save my money and not go broke.

That seems simple enough. But the Federal government today seems to be straining every nerve to short-circuit the process, go broke of its own accord, and bring on the dictatorship which history teaches is inevitable under such circumstances.

Burden of taxation

All of the experts seem to agree that at least 25 percent of the entire income of all Americans, from whatever source, goes for taxes. I have seen estimates as high as 33 percent. If some of the projects now planned are carried through it is not improbable that 40 percent of the entire income of all Americans will be taken for taxes.

Rufus Lusk, president, Washington, D. C. Taxpayers' Association, points out that when Germany and Italy, and now England, reached the 40 percent figure as the governments' share, they went socialistic. "There was nothing else to do," he said, "because there is no use working ten hours and receiving only six hours' pay. Let the government do it."

As late as 20 years ago there was one government employee to about every 40 of the population. Today there is one government employee to about every 22 of the population. Worse than this, there is one government employee to about eight of the working population of the United States.

Indirect or hidden taxation

In *Newsweek* of December 12, 1949, John Beckley had an illuminating article on "And That's Where Your Money Goes." It would be a good thing if every American taxpayer would read that article. Mr. Beckley points out: "Today there is a widespread belief that government

spending is essential to continued prosperity. Furthermore, people are in favor of spending money to promote the general welfare. And they are supremely confident that the United States is rich enough and powerful enough to finance any welfare program it sees fit to undertake.

"But the most comforting thing is the belief that someone else is footing the bill—probably big business and people with big incomes. The average citizen still has no concept of the size of the *hidden taxes* he pays every day of his life.

"It is not surprising that we have little idea of what government spending is actually costing us. Only half of the Federal government's revenues and less than ten percent of state and local receipts come from direct taxes on personal incomes. The rest comes mostly from taxes on business organizations. And these taxes, in turn, are passed along to the consumer in the form of higher prices. As a result, for most people (those with incomes of \$5,000 or less, which includes better than nine out of every ten taxpayers) the hidden tax burden is heavier than the income tax."

Larry Kreger of Chicago has developed a series of "needle stamps" so-called because they are designed to "needle" people into awareness of the tremendous burden of hidden taxes. Examples of the individual stamps are:

"Bread	10¢
Taxes	5¢
You pay	15¢

DON'T BLAME THE BAKING INDUSTRY FOR HIGHER PRICES."

"Milk	13¢
Taxes	8¢
You pay	21¢

DON'T BLAME THE DAIRY INDUSTRY FOR HIGH PRICES."

"Meat	50¢
Taxes	20¢
You pay	70¢

DON'T BLAME THE MEAT INDUSTRY FOR HIGH PRICES."

Hidden taxes are opiates to make us feel drowsy and without pain, while the body of our American free enterprise system (our body—yours and mine) is cut off inch by inch.

James F. Byrnes, Ex-Secretary of State, recently stated that insistence on bringing security to the American people through government protection against every conceivable hazard has made them "more afraid of life than of death."

Dr. Vannevar Bush, coordinator of the nation's wartime scientific program and president of the Carnegie Institution, said: "The danger of a central bureaucracy which plans all our lives, and does out what it thinks we need, is much more than that it will plan badly, although it undoubtedly will. The greater danger is to ourselves, that we will cease to think for ourselves, that we will not exert ourselves when only a drab mediocrity lies ahead, that we will substitute the arts of petty political maneuvering for virile self-reliance."

The most important thing to remember is that the cost of the welfare state is great and some one must pay for it. Remember that the bulk of corporation taxes are passed on to the consumer—to all of us. One thing is absolutely certain—the "planned economy" and the "welfare state" will be paid for by the great mass of the people. There is no other way.

Social security

The only real social security which this country can ever have is dependent on reasonable prices for farm products, reasonable wages for labor and reasonable profits for capital. Such social security implies that government act as a mediator and balance wheel and not as an all-powerful master. If this is done we might look for increased production, which is essential, because if those who work must provide goods for those who are unable to work, then there must be more goods. Otherwise there will be a drop in the standard of living for everyone.

It follows that social security benefits should *never* be so high as to remove from the individual the urge to work and save. It follows also that the burden of contributions by the worker, and through taxes (the government's share) should not be increased to the point where it interferes with the proper functioning of the free enterprise system. It seems to me most unwise to establish rates for the Federal Old Age and Survivorship Insurance plan which would create a 100 billion dollar reserve by the year 2000. It would seem much more sensible to create a modest reserve and then "pay-as-you-go."

The government does not need to own and manage the means of production, capital, land, and property in order for us to have socialism. As Professor Sly of Princeton says, "Regulatory devices that can prevent the acquisition of equity capital, restraint and distribution of profits, or prevent capital expansion are quite as effective control devices as ownership. If I may control rates, earnings, determine taxes, establish exemptions, maintain minimum wage policies and restrain the distribution of profits—you may have title to the deed."

We have already traveled a long way on the road to socialism in this country. Prior to the outbreak of the Korean war it appeared that the broad economic powers contained in the so-called "Spence Act" would not be granted to the Federal government. Most of these powers have now been granted, as war measures. Let us hope they will be judiciously used in a manner which will not impair the one greatest national asset and source of strength that we have—our urge and ability to produce. This is based on our free enterprise capitalistic system.

Suggestions

If you and I do not believe in the "welfare state"—the "planned economy" (planned by government, that is)—the socialistic state which is but a step from totalitarianism—what can we do? Have we gone too far already to turn back?

Not necessarily, though the situation is grave. There are some things that it seems to me that we could do. I will list several of them, and dwell only on the last one.

- (1) Place the old age pension system on a modified pay-as-you-go basis.
- (2) Support voluntary health programs, at the local level, and forget socialized medicine.
- (3) Reject Federal aid to education.
- (4) Place a constitutional ceiling on the Federal debt which may be incurred in peacetime.
- (5) Place a constitutional limit on the government's peacetime taxing power of individuals and corporations.
- (6) Drastically reduce non-military spending by the Federal government; eliminate deficit financing in periods of prosperity.

It is the taxpayer who makes our free enterprise capitalistic system work. In the

Safety offers a challenge

● We should develop a growing consciousness of the intimate relationship between safe practices and operations. Any safety program that proceeds as a separate and distinct proposition in relation to operating procedure cannot hope to succeed completely.—D. A. Hulcy, president, American Gas Association.

● Without exception, every company with which I am familiar that has a good accident experience has personal interest on the part of the top man in the company. A well-trained, enthusiastic, contented employee group is a utility's most valuable asset. It is a prime responsibility of management to maintain and protect this asset.

To me, lip service on the part of executives is not enough. The organization must understand that the top executive will not tolerate unnecessary accidents any more than he will tolerate waste or the beating up of a customer or serious interruptions in service that could be avoided.

The formula then for stopping accidents becomes quite simple: Given a top executive who makes it his business to follow-up on a safety program plus the right employee attitudes and training, and accidents won't happen.—C. B. Boulet, director of personnel, Wisconsin Public Service Corporation

● The need to conserve scarce manpower offers a new challenge to which I believe American industry and workers will rise. . . . Our problem in safety is not one of principle, but one of practice. Our problem is to overcome the inertia of certain employers and workers who either believe that some accidents are inevitable or that they always hit the other fellow.

In many cases, accident costs represent the difference between profit and loss. A small investment in safety pays high dividends.

You (the gas industry) are in an excellent position to prove this. Even

as your product flows into these many places of business, so your safety philosophy can follow your pipelines. You can introduce it (safety) into the thinking of your customers. In turn, they will benefit from fewer losses in men, greater production, greater profit. If your safety promotion brings the gas industry bigger dollar returns, more power to you. You will be helping to save human lives, helping your industry, your customers and your country.—W. L. Connolly, chairman, coordinating committee, The President's Conference on Industrial Safety

● Just sit down some evening and take an inventory of a day's activities. Think of all the people with whom you talked that day. List all the nice things you said—the compliments, thank you's and the offers to do something for others. Then think of all the griping you did. Pretty sorry record you will find on certain days. And it all reflects on the reputation of your company.

Under our American capitalistic system, the people choose whom they want to be in business and what they should sell. They are choosing now, and always have, and always will, more on emotional reasoning than on logic. They are going to choose us only if we systematically show them courtesy and attention.

This courtesy and attention should start within our "gas" family. Workers should show the same degree of courtesy to each other as is shown to our customers. Practice these "thank you's" among each other until they become a part of your real self. Get them in your mind so thoroughly that courtesy and consideration of others will be a natural way of life. *You can't have courtesy in your mind unless it is in your heart.*

Accidents will be reduced to a minimum, and you will feel better by doing for others.—W. H. Adams, safety director, The Manufacturers Light and Heat Co., Pittsburgh.

interest of all Americans the unlimited expenditure of money to satisfy various pressure groups must stop.

Abraham Lincoln said that "You can fool all of the people some of the time and some of the people all of the time, but you can't fool all of the people all of the time."

Perhaps today he might tell us that the government "can support all of the people some of the time and some of the people all of the time. But it can't support all of the people all of the time"—not and maintain a free economy.

Letter talks

My meaning isn't quite clear;
The way I talk is insincere.
I'm cluttered up with phrases trite—
The kind of stuff they used to write.

My paragraphs are much too long;
My ending's weak instead of strong.
I'd rather not go in the mail
Because I do not want to fail.

Forget the "I" and make it "YOU,"
And get my reader's point of view.
Rewrite, delete, correct, revamp,
And make me worth my three-cent stamp!

—W. H. Butterfield
in The Advertiser's Digest

New A.G.A. members

Gas companies

- Alabama-Tennessee Natural Gas Co., Florence, Ala.
(W. E. Eastep, president)
Minnesota Valley Natural Gas Co., Minneapolis, Minn.
(R. E. Crawford, president)

Manufacturer companies

- American Stove Co.—Cleveland Div., Cleveland, Ohio
(William Lotter, manager)
The Dexter Co., Fairfield, Iowa
(R. S. Blough, chief engineer)
Gas Appliance Services, Inc., Chicago, Ill.
(E. A. Furkert, president)
H. C. Little Burner Co., Inc., San Rafael, Calif.
(F. A. Ryder, chief engineer)
A. O. Smith Corp., Heating Div., Toledo, Ohio
(Donald D. Williams)

Individual members

- Oscar Agraz, Coast Counties Gas & Electric Co., Walnut Creek, Calif.
Hiroshi Anzai, Tokyo Gas Co., Ltd., Tokyo, Japan
Joseph J. Bates, Crown Stove Works, Chicago, Ill.
C. R. Beddows, Iowa Public Service Co., New York, N. Y.
James F. Bell, Portland Gas & Coke Co., Portland, Ore.
Louis Belon, Coast Counties Gas & Electric Co., Concord, Calif.
Frederick J. Blume, Rheem Manufacturing Co., Long Island City, N. Y.
Douglas M. Brown, Central Illinois Light Co., Springfield, Ill.
Frank Buck, Arizona Edison Co., Inc., Yuma, Ariz.
J. F. Burton, Transcontinental Gas Pipe Line Corp., Houston, Texas
Charles A. Byron, The Connecticut Light & Power Co., Waterbury, Conn.

Essential part

● We have found that home service can demonstrate, dramatize and glamorize gas service and gas appliances. We have found that home service can illustrate and establish sales points and advantages better than any other activity at corresponding cost. . . . An essential part of every company's sales activities should be an adequate and properly trained home service department.—*Irving K. Peck, vice-president, The Manufacturers Light and Heat Co., Pittsburgh.*

- Everett W. Campbell, Conversions & Surveys, Inc., New York, N. Y.
Carlo Ceruti, Societa' Italiana Per Il Gas, Torino, Italy
Robert D. Constable, Niagara Mohawk Power Co., Syracuse, N. Y.
F. Shepard Cornell, A. O. Smith Corp., Kan-
kakee, Ill.
Franklin Darter, Peerless Manufacturing
Corp., Louisville, Ky.
Wendell C. Davis, Cribben & Sexton Co., Chi-
cago, Ill.
Fred Depp, The Brooklyn Union Gas Co.,
Brooklyn, N. Y.
Harold J. Donald, The Pennsylvania State Col-
lege, State College, Pa.
Byron T. Dudding, United Fuel Gas Co.,
Charleston, W. Va.
Martin R. Engler, Jr., San Diego Gas & Elec-
tric Co., San Diego, Calif.
Robert J. Foster, George D. Roper Corp.,
Newark, N. J.
P. D. Fowler, Jr., Lovekin Water Heater Co.,
Philadelphia, Pa.
Fred Fuchs, Central Hudson Gas & Electric
Co., Poughkeepsie, N. Y.
M. Bernice Garrigus, Public Service Electric
& Gas Co., Summit, N. J.
Frank P. Gibbons, Viking Air Conditioning
Corp., Cleveland, Ohio
Sidney Hancock, Long Island Lighting Co.,
Mineola, N. Y.
Gordon P. Hentz, Estate Stove Co., Hamilton,
Ohio
Takejiro Iguchi, Osaka Gas Co., Ltd., Osaka,
Japan
William T. Ivey, Southern Natural Gas Co.,
Birmingham, Ala.
H. C. Judd, Jr., Coast Counties Gas & Electric
Co., Santa Cruz, Calif.
A. Gordon King, New York, N. Y.
Kenneth D. Knoblock, Wisconsin Southern
Gas Co., Lake Geneva, Wis.
Arthur W. Krause, The Gas Machinery Co.,
Euclid, Ohio
Edward Krumland, Coast Counties Gas &
Electric Co., Antioch, Calif.
Elwin S. Larson, The Brooklyn Union Gas
Co., Brooklyn, N. Y.
Fred F. Lauer, Cribben & Sexton Co., New-
ark, N. J.
Bertha Lorentzen, Mountain Fuel Supply Co.,
Provo, Utah
Joseph S. Lowe, Thermic Equipment & Engi-
neering Co., Ltd., Preston, England
Sydney M. Lubach, The Brooklyn Union Gas
Co., Brooklyn, N. Y.
W. T. Lucking, Arizona Edison Co., Inc.,
Phoenix, Ariz.
Harold McConnell, Jersey Central Power &
Light Co., Long Branch, N. J.
Clyde V. McCurdy, Equitable Gas Co., Pitts-
burgh, Pa.
Arthur J. Maahs, Johns-Manville Sales Corp.,
New York, N. Y.
Edwin S. Mack, United Cities Utilities, Chi-
cago, Ill.
Tracy B. Madole, American Stove Co., St.
Louis, Mo.
W. C. Mainwaring, British Columbia Electric
Co., Vancouver, B. C.
Willard M. Milbourne, Valley Welding &
Boiler Co., Bay City, Mich.

- Akashi Miyake, Osaka Gas Co., Osaka, Japan
E. C. Mueller, Jr., Arizona Edison Co., Inc.,
Phoenix, Ariz.
E. S. Munson, Royal Heaters, Inc., Alhambra,
Calif.
Graham F. J. Murray, Epsom, Surrey, England
William E. Nary, Equitable Gas Co., Pitts-
burgh, Pa.
Herbert Nelson, Northwestern Public Service
Co., Grand Island, Neb.
H. S. Netting, Jr., Equitable Gas Co., Pitts-
burgh, Pa.
Donald C. Nicol, Ruud Manufacturing Co.,
Jersey City, N. J.
Hans E. Nissel, Citizens Utilities Co., Cos
Cob, Conn.
Ivan C. Odom, Pacific Gas & Electric Co., San
Francisco, Calif.
Alton B. Parker, Hardwick Stove Co., Hous-
ton, Texas
M. H. Parkinson, Jr., The United Gas Im-
provement Co., Philadelphia, Pa.
P. E. Peter, The Brooklyn Union Gas Co.,
Brooklyn, N. Y.
Du Wayne J. Peterson, Minneapolis Honey-
well Regulator Corp., Cleveland, Ohio
E. Pitcher, Illinois Fryer & Equipment Co.,
Inc., Chicago, Ill.
Henri V. Precheur, Public Service Electric &
Gas Co., Newark, N. J.
John Pyeatt, Coast Counties Gas & Electric
Co., Concord, Calif.
Lee W. Rasch, Security Manufacturing Co.,
Kansas City, Mo.
Edward T. Rasmussen, Trageser Copper
Works, Inc., Maspeth, N. Y.
Edmund C. Reichard, American Smelting &
Refining Co., Barber, N. J.
L. Sanford Reis, Reis & Chandler, Inc., New
York, N. Y.
J. E. Revelle, Chicago Bridge & Iron Co.,
Boston, Mass.
David P. Roberts, Public Service Co. of Col-
orado, Denver, Colo.
Erwin O. Rossbach, The Brooklyn Union Gas
Co., Brooklyn, N. Y.
James A. Scanlon, The Ohio Fuel Gas Co.,
Columbus, Ohio
Allen D. Schrodt, Southern Union Gas Co.,
Dallas, Texas
Fay B. Seaman, The Ohio Fuel Gas Co., Zanes-
ville, Ohio
Walter H. Seaman, Long Island Lighting Co.,
Mineola, N. Y.
Seiichi Shikaku, Osaka Gas Co., Ltd., Osaka,
Japan
M. L. Smith, New York State Electric & Gas
Co., Binghamton, N. Y.
Phyllis Snow, Mountain Fuel Supply Co.,
Salt Lake City, Utah
Philip L. Walker, Jr., Penn State College, State
College, Pa.
G. B. Weck, California Public Utilities Com-
mission, San Francisco, Calif.
Arthur F. Westerfield, United States Radiator
Corp., Detroit, Mich.
Robert J. Wheeler, The Brooklyn Union Gas
Co., Brooklyn, N. Y.
R. V. Wilson, Engineers Ltd., Pipeline Co.,
San Francisco, Calif.
James Wyrzten, The Brooklyn Union Gas Co.,
Brooklyn, N. Y.
Paul A. Yetter, Public Service Co. of Colo-
rado, Grand Junction, Colo.

Home Service

(Continued from page 10)

Co., Pittsburgh. Mr. Peck dramatized the importance of the gas industry in the daily lives of people, the role of each company as a public servant and, the importance of home service to customers and the community.

Mr. Peck also outlined the business set-up of a gas company organization. He noted that a well-operated gas utility through efficient management must make sufficient earnings to meet expenses, payrolls, and fair dividends to stockholders. He reminded the audience that each company has a high investment per employee. This financial backing should give home service members an added sense of importance, security and responsibility in their work.

Speaking specifically to girls new in home service, he counseled "You are the gas company to the customer. Courtesy to the public and the best possible service constitute the fundamental corner stone of our policy. Your words and your actions are interpreted as those of the gas company. New people should keep constantly in mind that each member of the organization needs to be courteous and considerate so that the customer will feel that the gas company is pleasant to deal with and that you personally have taken a human interest in her problem."

An outstanding feature of the Workshop was the afternoon devoted to group discussion. Subjects dealing with home service operation and techniques were given to 12 groups whose leaders led the discussion and at the close of the afternoon made five-minute reports to the general assembly. Coordinator of the discussion groups was Flora Dowler, The Manufacturers Light and Heat Company. Discussion leaders were: Katherine Barnes, Equitable Gas Co., Pittsburgh; Mrs. Mary Louise Bohn, Laclede Gas Co., St. Louis, Mo.; Mildred Clark, Oklahoma Natural Gas Co., Tulsa; Viola Decker, North Shore Gas Co., Waukegan, Ill.; Margaret Doughty, Bendix Home Laundry Institute, South Bend, Ind.; Mrs. Ruth Englehart, Central Hudson Gas & Electric Corp., Poughkeepsie, N. Y.; Thelma Holmes, Savannah Gas Co., Savannah, Ga.; Elizabeth Lynahan, The Peoples Gas Light & Coke Co., Chicago, Ill.; Isabel McGovern, Minneapolis Gas Co., Minneapolis, Minn.; Judith O'Flaherty, Philadelphia Elec-

tric Co., Philadelphia, Pa.; Irene L. Muntz, Rochester Gas & Electric Corp., and Mrs. Eleanor Wiese, Public Service Electric & Gas Co., Newark, N. J.

In a panel discussion on the "Home Call," Eleanor Morrison, Michigan Consolidated Gas Co., Grand Rapids, reviewed questions submitted by home service personnel on operation problems and needs for home calls at the present time. This discussion proved an interesting part of the Workshop program. Panel members were: Mrs. Kathryn Ashcraft, The Ohio Fuel Gas Co., Columbus, Ohio; Mrs. Gladys Bramblett, Fall River Gas Works Co., Fall River, Mass.; Shirley Fegert, The Gas Service Co., Wichita, Kan.; Mrs. Mary N. Hall, Elizabethtown Consolidated Gas Co., Elizabeth, N. J.; Mrs. Kathryn O. Johnson, Rockland Gas Co., Spring Valley, N. Y.; Mrs. Florence Neely, Consolidated Gas Electric Light & Power Co. of Baltimore; Katherine L. Rathbone, Southern Counties Gas Co., Los Angeles, Calif., and Mrs. Elyse Van Dyke, Birmingham.

The third day of the Workshop was attended by many representatives of government agencies and National Associations located in Washington. At the concluding luncheon, the Washington guests of honor were introduced. Among the group was Dr. Hazel Stiebeling, chief of the Bureau of Human Nutrition and Home Economics. Dr. Stiebeling briefly outlined the work of the Bureau and its services to home service and others interested in Nutrition and equipment. She introduced members of her staff, including Mrs. Lenore Sater Thye, head of Housing and Household Equipment and Dr. Esther Batchelder, head of the Food and Nutrition Division.

Members of the Program Committee who presided at the Workshop sessions are as follows: Ruth Sheldon, Washington Gas Light Co.; Eleanor Morrison, Michigan Consolidated Gas Co.; Irene L. Muntz, Rochester Gas & Electric Corp.; Vivian L. Marshall, New Orleans Public Service Inc., and Jessie McQueen, home service counselor, A. G. A.

Popular social hours following two days of the Workshop were sponsored by equipment divisions of Gas Appliance Manufacturers Association. The first day's social hour was sponsored by Servel Inc.; the second by the manufacturers of "CP" gas ranges.



1951

FEBRUARY

- 16 •A. G. A. Great Lakes Personnel Conference, Palmer House, Chicago

MARCH

- 12-14 •Mid-West Gas Association, annual convention, Hotel Fontenelle, Omaha
26-27 •A. G. A. Eastern Natural Gas Regional Sales Conference, William Penn Hotel, Pittsburgh, Pa.
29-30 •New England Gas Association, annual meeting, Hotel Statler, Boston
29-30 •Oklahoma Utilities Association, annual convention, Mayo Hotel, Tulsa

APRIL

- 2-4 •A. G. A. Sales Conference on Industrial and Commercial Gas, Industrial and Commercial Gas Section, Shoreham Hotel, Washington, D. C.
9-11 •A. G. A. Mid-West Regional Gas Sales Conference, Residential Gas Section, Edgewater Beach Hotel, Chicago, Ill.
10-12 •Southwestern Gas Measurement Short Course, University of Oklahoma, Norman, Okla.
16-18 •A. G. A. Distribution, Motor Vehicles and Corrosion Conference, Hotel Peabody, Memphis, Tenn.
16-18 •GAMA annual meeting, Drake Hotel, Chicago, Ill.
19-21 •Florida-Georgia Gas Association, Hollywood Beach Hotel, Hollywood Beach, Fla.
23-25 •Southern Gas Association, Biloxi, Miss.
23-25 •National Conference of Electric and Gas Utility Accountants, Hotel Sherman, Chicago, Ill.
26-27 •Pacific Coast Research & Utilization Conference, Berkeley, Calif.
26-27 •Indiana Gas Association, French Lick Springs Hotel, French Lick

MAY

- 7-8 •A. G. A. Natural Gas Department, spring meeting, Baker Hotel, Dallas, Texas
7-9 •Missouri Association of Public Utilities, Jefferson Hotel, St. Louis, Mo.
7-11 •National Restaurant Exposition, Navy Pier, Chicago, Ill. (A. G. A. will exhibit)
14-16 •A. G. A. Production and Chemical Conference, Hotel New Yorker, New York, N. Y.
14-18 •A. G. A. Industrial & Commercial Gas Section, Industrial Gas School, William Penn Hotel, Pittsburgh, Pa.
15-17 •Pennsylvania Gas Association, Wernersville, Pa.

OCTOBER

- 15-18 •A. G. A. annual convention, St. Louis, Mo.

Personnel service

SERVICES OFFERED

Controller-Vice President, skilled administrator, employed large utility; previous heavy industrial experience. Keen analyst, gets things done minimum cost. Thorough knowledge accounting, auditing, finance, control, budgetary functions, surveys, investigations, taxes, insurance, government contacts. Educated business administration, accounting and law. Can relocate, U. S. or abroad; knowledge languages. 1664.

Executive-Operation or Sales—16 years' supervisory, sales, engineering experience gas utilities. Practical knowledge most phases gas industry, L.P. Natural and Manufactured gas. South or West preferred but will consider other location. Available 30 days. Present position Commercial and Industrial Manager, including house heating for 25,000 meter property. —Married (41). 1665.

Sales-Advertising—Promotion Executive. Nearly 20 years' with large gas utility for whom outstanding results were obtained in sales, dealer cooperation, advertising, home service, publicity, public relations, employee publication and safety campaigns. Interested in connection with another utility or long pipeline company. Reasons for change will satisfy prospective employer. 1666.

Executive Assistant. Many years experience in utility companies. Unusual knowledge general and customers accounting, stores, payroll, plant records, customer records, gas measurement, etc. Can design systems, coordinate paper work. Know all kinds office machines. 1667.

Sales-Technical or Industrial Management. Chemical engineer with over two years of experience in main manufacturing plant of large New York gas utility. Degree almost completed in industrial engineering. Desires stable position in sales technical service or one allowing for application of industrial engineering practices. New York City or vicinity. Married. Age 26. Favorable references. 1668.

POSITIONS OPEN

Natural gas interstate pipeline company, located in the middle west, has immediate need for an **Assistant Plant Records Supervisor**. Adequate salary commensurate with qualifications. In reply state in detail past experience, education, age, references, salary requirements, and enclose small photo. Replies confidential. 0593.

Sales Manager for gas utility with 28,000 meters and a growing bottle gas business. Operations cover manufactured gas, propane air and recently converted natural gas service. Location —Pennsylvania. 0594.

Development Engineer wanted by Northern California Furnace Manufacturer. Must be thoroughly familiar with A.G.A. testing procedures. Previous experience with development for appliance manufacturer necessary. This position offers a good future with small manufacturer. Submit all personal data with snapshot together with detail of experience, references and salary desired. Replies confidential. 0595.

Office Methods and Procedures. Position open in large natural gas company located in the middle west for a man experienced in the development of office procedures and in the design and use of forms. To be considered applicants must furnish full details of qualifications, a brief personal digest, age and salary expectation. Replies will be confidential. 0596.

Immediate opening for **I.B.M. Supervisor**, capable of operating and supervising a new large installation. Requires good general knowledge of accounting and not less than five years experience in tabular work, preferably in the public utility field. To be considered for this position, located in a large mid-west city, applicants must furnish full details of qualifications, a brief personal digest, age and salary expectation. Replies will be confidential. 0597.

Engineer-Design, experienced in gas plant design for extensive program of new construction and improvement to present plant facilities by large eastern gas manufacturing company. Salary commensurate with experience. 0598.

Company Representative. Position open in sales and service in Northeastern territory. Background of distribution or gas measurement advisable. This is a nationally known concern of unusual stability and progressiveness. Compensation based on experience and contacts with gas utilities. 0599.

Sales Manager wanted for manufactured and natural gas properties. Must be aggressive, hard-hitting and interested in increasing number of customers, load and appliance sales. Experience in gas sales required. Write for appointment, giving full resume. 0600.

Large gas utility on eastern seaboard requires the services of an experienced **Industrial Sales Manager**. Applicants must be leaders in gas sales to industrial and commercial customers, and allied fields, with an engineering educational background. Salary commensurate with ability. Reply in confidence giving age, education, work experience and other pertinent information. 0601.

Graduate Home Economist experienced in natural gas utility field to take responsible charge of new department in Albuquerque, New Mexico, one of the fastest growing cities in the Southwest. Must have pleasing personality, neat appearance, age 25 to 35. Guaranteed monthly salary, pleasant working conditions, numerous attractive employee benefits after period of regular employment. Submit abstract of experience, qualifications, employment history. 0602.

Securities

(Continued from page 13)

cent of all gas industry financing. In addition, \$37 million of the preferred stocks and \$7 million of the debentures were convertible issues.

These increases in equity financing were entirely concentrated in the natural gas branch of the industry. While financing through the issuance of bonds declined during 1950, the placement of other debt securities, such as debentures and long-term notes, increased substantially from 11.9 percent of all securities issued in 1949 to 25.2 percent during 1950. Straight natural gas operating and holding companies were the principal factors affecting this trend.

Data presented in the report were gathered from various reliable public sources. However, they will be subject to possible upward revision later in the year as reports from individual utilities are received. Such revisions, together with salient cost and yield trends, are expected to be released by A.G.A. this summer in the 1950 edition of *Gas Facts*.

In addition to omitting sales of sub-

sidiaries to their parent holding companies, the tabulations also exclude secondary sales. Companies issuing securities were classified for 1950 and 1949 as to the type of gas which they were distributing in the respective year of such issues.

Detailed definitions are appended to the table on page 13.

Home Service and sales

(Continued from page 12)

The thing which I think we can profit by in his campaign was that he sold many people by group demonstrations. In other words, he talked to large groups of people as often as he possibly could. You will recall *Life Magazine's* story of his indefatigable campaigning. Always on the go to the next town where he did a group selling job.

Group selling is something that is second nature to the gas people, but I do not believe that the idea of group selling has been carried far enough by our sales department. We need salesmen who can sell to a group of people. Those sales-

men can be developed only through the help of the home service personnel who have the knowledge of what to talk about and how to talk to a group. Home service knows how to put on the best pitch.

In your own personal experiences, how often have you told yourself that you were not going to buy from a salesman when he started his sales talk. You pre-committed yourself not to buy. But had you sat among a group of people and heard the same sales talk, he would have had a better chance of selling you because you were not pre-committed. I am convinced that the gas industry can increase its sales volume if it will greatly increase its group selling effort, as well as its direct-to-individual selling. Direct selling is needed for closing.

Never forget your opportunity to sell when you are before a group. It is nice to educate and entertain, but your first responsibility is to sell. It is also your obligation to appear before as many groups as you can and to train more salesmen to conduct group selling demonstrations. This type of program is where home service can do its most effective work.

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